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Part I: Co-operation and Association

DENMARK.

CO-OPERATIVE DAIRIES IN DENMARK (*Continued*).

(This Article has been prepared at our request by the Danish Bureau, the International Institute of Agriculture).

§ 3. CO-OPERATIVE MANAGEMENT.

The daily business is conducted by the technical manager (*Mejeristen*), who is now as a rule a trained specialist. In the early years of the co-operative dairies this was not the case and in many places it is not so even now. The younger technical managers have, however, always received thorough instruction, since they have first been employed as apprentices in dairies and have then attended dairy schools. Three fourths of all the technical dairy managers have had an education of this kind.

The technical managers are organized in a technical dairy managers' union (*Dansk Mejeristforening*) for the whole country, which counts almost all the technical managers among its members. This union was founded in 1887. Its object is the development of the Danish dairy industry in general and especially the better instruction of all engaged in it and the encouragement of their collaboration with each other. In accordance with this idea, the union not only protects the interests of the technical dairy managers, but to an even greater degree exerts an important action in many ways for the advance of the dairy industry, of which we shall speak hereafter. The union is divided into 26 local circles each with its board of management independently conducting the business of the circle in accordance with the rules of the union. The organ of the union is the weekly paper "*Mejeritidende*."

The technical manager is generally paid in proportion to the amount of milk received in the dairy and usually has an interest in the business. Frequently he is paid, as if he supplied a certain number of kilograms of milk per 1,000 kgs. of the milk received, at the average price the dairy receives for its milk. Out of his receipts he has usually to pay a certain percentage for consumption of fuel, light, use of furniture and other current working expenses.

The technical manager himself appoints the assistants he requires and pays them out of his own pocket.

The average receipts of a manager are, according to the returns of the Statistical Department, about 3,800 cr. a year; besides this he has free quarters. When he has paid his assistants, he has about 1,950 cr. net income, independent of his free quarters. The payment varies extraordinarily, not only in its amount, but also in relation to the importance of the dairies.

Both the Dairy Managers' Union and the dairy unions have been working in recent years for the regulation of the conditions of payment and the grant of higher salaries, and their efforts have already had good results. Moreover, what was certainly highly important was that the dairy unions themselves encouraged the idea and took the initiative in fixing a scale of remuneration, which is gradually being accepted as establishing the minimum of payment.

The Dairy Managers' Union has also been working to give the education of the apprentices a more substantial foundation and arrange for its supervision, by the appointment of a committee to examine if the course of instruction has been regularly followed in such a way that the learner has had opportunity of making himself acquainted with the various branches of the work and that a certificate has been given him.

In the co-operative dairies, the work of butter making is of quite the most importance, as the following table reproduced from the Dairy Statistics of 1913 will show.

Utilised for	Whole Milk Received	Separated Milk and Butter Milk
	%	%
Sale	0.5	2.2
Cheese Making	0.5	4.3
Butter Making	99.0	—
Returned to Members	—	93.5

It is only in urban dairies and in those in the neighbourhood of Copenhagen that the sale of milk is of any importance. Some dairies, especially those on the frontier, export cream to the German dairies.

Cheesemaking decreased considerably in the first years of the co-operative dairies and still is far from having the development and importance it had under the older conditions of Danish dairy farming. It is for the most part limited to coarse kinds intended for the home market. But cheesemaking is of considerably greater importance in the dairies of the large landowners and in the dairies worked in common, where it is not easy to utilise the milk in any other way. Even amongst the co-operative dairies we may now observe a growing interest in cheesemaking. The Dairy Managers' Union has especially begun to exert itself in favour of the increased manufacture, by means of the systematic holding of exhibitions and in connection with them, the classification of the different qualities of cheese and experiments in cheesemaking and the keeping of cheese. In 1901 a special committee was appointed for the organisation of co-ordinated and scientific experiments in cheesemaking. It aims at establishing a special scale of points, and its efforts are centred on the determination of a kind of cheese suited to the English market. If the result is satisfactory, it is probable that cheesemaking will assume very much more importance for Danish dairies.

These efforts are encouraged by the State by means of subventions to the cheese shows and the payment of the salary of an expert.

But cheesemaking can hardly become more than a profitable auxiliary industry. Buttermaking predominates, and from the first every effort was made for the adoption of the most economical methods, the production of an article as fine and as uniform as possible and possessing the best possible keeping qualities, and for securing the best possible conditions of sale. This effort has succeeded to such a degree that Danish butter is so uniform that it can be placed on the market under a single trade mark (*Lurmærke*).

The dairy industry finds a great support, in this connection, in the series of experiments in dairying, which are carried out in the Laboratory for Agricultural Experiments of the Royal Veterinary and Agricultural Academy. In this way a succession of important improvements have been attained, and in addition the dairies have, by means of innumerable experiments for the purpose of comparing and judging the various kinds of apparatus constructed for the requirements of dairies, obtained guidance both in respect to the purchase of machinery and to the use of it. In like manner experiments in regard to the ripening of cream led to the application of pure cultures of lactic acid bacteria. Experiments in regard to the preventive effects of pasteurising on defects in butter, carried out in 1891, induced almost all the dairies to begin pasteurising their cream, within the next few years, with the object of giving their butter the best possible keeping qualities and rendering it as even as possible. In most places the separated milk had been already earlier pasteurised, so that the members might receive it back in a utilisable condition. Pasteurisation both of the separated milk and the butter milk was first ordered by law in 1898 and that of cream for production of butter for export first in 1904, after practically all dairies had adopted this process of their own accord.

A very effectual incentive was given to the efforts to make Danish butter, a first class, uniform commercial article, by the butter shows, of which there are three different kinds; the legally established Butter competitions of the Experimental Laboratory, the local shows of butter in casks (*Böttendstillinger*) and the large annual provincial shows.

Since 1889, a continuous succession of butter shows has been held at the experimental laboratory of the Veterinary and Agricultural Academy. These shows have acquired great credit in dairy farming circles and have had a continually larger number of adherents, so that on January 1st., 1912, 1,078 dairies were represented at them. On January 22nd., 1912, these shows became compulsory under the Law of April 12th., 1911, on trade in butter and foreign agricultural produce, etc. The exhibiting dairies are summoned to submit their butter for examination by the judges regularly three times a year. They must at once send a "drittel" (100 kilos.) of the day's output of butter. This is then kept 14 days before it is judged. The names of those dairies which are judged to have sent the best butter are published. The dairies the butter from which is judged to be bad are warned that they run the risk of forfeiting the right to use the "Lurmærke," and receive instructions to seek advice from the Government expert. If there is no improvement, the dairy will really lose the above mentioned right.

The shows of butter in casks are local shows, which as a rule are meant for the dairies in a single circle of the Dairy Managers' Union. They were originally arranged by this Union, and later on by the dairy unions also. In each circle from 6 to 12 shows are held a year, at which the butter of the several dairies is compared and judged by a committee of judges, consisting of the technical managers, butter exporters and the local dairy expert. The butter is kept 14 days before it is judged; the exhibitors do not know beforehand the day on which they will be invited to send in their exhibit. The several dairies are informed privately of the results of the judging. At the end of the year the names of those dairies are published that were judged to have forwarded the best butter, or the produce of which in the course of the year did not fall below a certain standard.

The original object of these shows was only to give the dairy managers a better knowledge of butter produce, since it was rightly considered that the quality, on which the price depends, must be judged by the consumer alone. So the dairy managers in rotation took part in judging under the direction of experienced men and specialists. This system, continued for years, has brought it about that most of the Danish dairy managers have now a good and solid knowledge of the produce in question. But it was soon apparent that these shows might have advantages of another kind. Through them the dairy managers had an opportunity of inspecting and examining the produce of other dairies, of discussing the various questions of importance for their business with competent persons and taking council with them. In connection with the shows lectures were delivered and discussions opened on matters relating to dairy farming.

pecially to butter production and they have proved themselves generally to be an excellent means of instruction. At the same time these frequent examinations as well as the experiments of the laboratories are a potent incentive to the removal of defects and the improvement of the quality of butter generally.

In addition to these local shows, in the three principal regions of the country larger butter and cheese exhibitions are annually held. Only those dairies that have exhibited at all the shows of butter in the districts held in their region are allowed to exhibit. Manufacturers of dairy machinery also exhibit at them. The character of these shows is above all competitive. Medals and honourable mentions are awarded. Altogether their purpose is rather to excite public interest than to assist the ordinary work and on this account they have been attacked as useless, yet hardly fairly; for they are certainly not without real importance; in any case the merchants are agreed that the butter before and after the shows is better than at other times.

Whilst the shows have made it possible to compare the produce of the various dairies and in this way have assisted in obtaining a uniform and good quality of butter, the dairy statistical returns, making possible a comparison of the working expenses, profit and prices obtained, have been perhaps of no less importance. They have favoured the adoption of the most economical system of working and the attainment of a uniformly good price for the butter.

Already since 1884, in the earliest years of co-operative dairying, in the desire to ascertain the working expenses and net yield of the dairies led to the collection and publication of the balance sheets, and since comparison within the limits of so uniform and special a field necessarily proved in a high degree instructive, its interest for dairy circles was considerable and the statistics were continued and extended. When the dairy unions were founded they made it one of their duties to collect and publish dairy balance sheets and some of them systematically elaborated the material collected.

The unfavourable butter quotations led to the weekly publication since 1894 of local reports of the prices of butter received, so that each individual dairy might see if it had received prices in proportion to those received by other dairies.

Since 1903 balance sheets from all parts of the country have been submitted to a common systematic elaboration. A Special Committee for Dairy Statistics consisting of representatives of the Central Organization of the Dairy Unions and of the Managers' Union, has been charged with the work and the State gives subventions for the elaboration of the material and its publication. The number of dairies that support this undertaking and have sent in their balance sheets has constantly increased; they now number more than 700.

On the basis of these statistical returns we shall now give a more detailed account of the situation of the dairies and their development in recent years.

The average number of milk-suppliers per dairy in 1913 was 157, the number of cows, 958. The amount for which the dairies were insured against fire, which to some extent corresponds with that of the invested capital, was on an average 33,212 cr. Consequently, the value of the capital invested in all Danish dairies must amount to about 40,000,000 crs. The debt still due per dairy was 16,315 cr. The gross yearly receipts per dairy were 273,306 crs. Out of these receipts, on an average, 36,948 crs. were distributed as bonus, the balance of the net profits being discounted and distributed in monthly instalments to the suppliers.

The amount of milk supplied to the dairies per cow per year was 2,621 kgs. (To arrive at the actual yield of milk, we must add that utilised for household purposes, which may be reckoned at probably 10 %). This figure has steadily risen, partly owing to better feeding and partly to a remarkable improvement in the quality of the stock.

The average annual yield per cow has been:

Year		Kg.
1884	about	1,250 - 1,500
1888	»	1 750
1898	»	1,975
1903	»	2,425
1908	»	2,675
1913	»	2,621

This increase, together with the increase in the number of cows, which was in 1881 900,000 and in 1913 1,300,000, has given the dairies, in spite of the fact that they are continually increasing in number, always more milk to treat. According to the industrial census of 1906, the amount of milk treated per dairy was about 2,130,000 kgs; according to the dairy statistics of 1913 it was 2,510,000 kgs.

At the same time, success has gradually been attained in the better utilization of the milk. The average quantity of milk required to make a kilogram of butter has steadily decreased.

The amount of milk per kg. of butter was:

Year	Kg.
1898	26.5
1903	25.6
1908	25.6
1913	25.3

If we carried our investigations still further back, we should find a still greater difference.

The gross amount received for the butter made from 1,000 kg. of milk was in 1913, 84.12 crs., and the corresponding working expenses 7.8 öre. Reckoning, as is customary, the separated milk and butter milk turned to members at 2 öre per kg., the whole milk yielded on an average 5 öre net per kg.

The working expenses per 1,000 kgs. of whole milk were distributed as follows:

	Öre
Carriage of Milk.	340.8
Fuel	104.2
Remuneration to Manager and Assistants . .	755.0
Upkeep of Building	12.6
Upkeep and Renewal of Plant	40.8
Other Expenses	234.4
Total . . .	887.8

The amount of these items of expenditure of course varies very greatly not only in the dairies as compared with one another, but also in the various districts of the country and in dairies of different sizes. For example, the cost of carriage must necessarily vary, according as the suppliers live at greater or less distances from each other. In isolated thinly peopled *Aemter* (1), it is quite 4 or 5 crs. per 1,000 kg; in others more densely populated only from 2 to 3 crs. Characteristic differences appear also in the different districts in respect to the cost of installation and the interest on it, the greater or less wealth of the population, or even their spirit of economy, making itself felt in the matter of the installation.

The difference in the working expenses of the large and small dairies is of great interest. Leaving out of consideration such expenses as are not borne by all dairies, such as expenditure for carts, cans (for transport), cheesemaking and small consignments, we find that the working expenses reduced in this way will give us in some degree a true and reliable idea of the effect of the size of the dairy. The results of the comparison of the working expenses of dairies of different sizes are shown in the following Table:

(1) Denmark is divided for administrative purposes into "*Aemter*."

Reduced Working Expenses (inclusive of Carriage of Milk) per 1,000 kgs.

	Ore per 1,000 kgs.
3,000,000 kgs. and over	820.4
From 2,500,000 kgs. to 3,000,000 kgs. . . .	848.6
" 2,000,000 " " 2,500,000 " . . .	864.6
" 1,500,000 " " 2,000,000 " . . .	881.6
" 1,000,000 " " 1,500,000 " . . .	937.2
Less than 1,000,000 kgs.	1,101.2

The working expenses are thus considerably less for the large dairies than for the small ones, and they are especially heavy for quite small dairies. On the contrary there is no difference in regard to the quantity of milk required to make a kilogram of butter, nor in regard to the price of butter, as between large and small dairies.

The individual differences may also be exceedingly great in certain directions, even in cases in which special circumstances only come into consideration in a small degree and even taking account of the difference in size of the dairies. In respect to a single item, the cost of fuel the following table shows how great the difference may be and what immense progress is possible in this direction.

Average Expenditure on Fuel in Crowns per 1,000 kgs. of Milk from one quarter of the Dairies with Maximum and Minimum Consumption of Coal

Dairies receiving a Quantity of Milk of	One quarter of Dairies with Maximum Consumption of Coal	One quarter of Dairies with Minimum Consumption of Coal	Total Number of Dairies
Over 3,000,000 kgs.	112	72	90
From 2,500,000 kgs. to 3,000,000 kgs. . . .	120	78	98
" 2,000,000 " " 2,500,000 " . . .	124	82	102
" 1,500,000 " " 2,000,000 " . . .	136	90	112
" 1,000,000 " " 1,500,000 " . . .	152	91	124
Under 1,000,000 kgs.	236	122	170

We see that the individual differences are greater among the small dairies, and this is generally true.

In these directions the dairy statistics have had particular importance, as they have shown the individual dairies their special faults and have incited them to emulate those more advanced.

§ 4. EXPORT OF THE BUTTER OF THE CO-OPERATIVE DAIRIES.

The total export of Danish dairy produce in 1913 amounted to 23,000,000 cr. Of this 22,500,000 cr. represented milk and cream exported to Germany, and 200,000,000 crs. butter, altogether about 91,000,000 kgs. By far the largest proportion of butter, as is shown in the following table, was shipped to Great Britain:

Export of Danish Butter (in "Drittele" of 100 kgs).

To	1913	1912	1911	1910
Great Britain	812,867	752,575	797,550	811,426
Austria-Hungary	42,928	31,333	17,887	7,425
Germany	12,408	27,124	39,050	25,950
Switzerland	2,229	2,031	1,383	284
Other Countries	468	669		
Total . . .	870,900	813,732	855,870	855,085

For easier sale on the British Market most of the Danish butter is packed in "*Drittele*" of 100 kgs. net. A small quantity (about 1,000,000 kgs. in 1913) is exported in boxes, principally to England, and a somewhat more important quantity (in 1913 about 3,000,000 kgs.) in air tight packages to many different, especially oversea, countries.

Danish butter has a firm place on the English market, as Denmark provides quite $\frac{2}{3}$ ths. of the total amount of the butter imported there and twice as much as Australia, the country next in importance as a supplier of butter, can furnish. Its position in the market is rendered even more firm by the fact that Danish butter is so uniform in quality and quantity as compared with that of other countries. There is only a slight difference between the butter of the various dairies, and an almost equal amount is produced every week throughout the year. As a first class product it is also less affected by falling prices than inferior goods. The butter also, thanks to the efficiency of the Danish tradesmen has become universally known in England, so that even Irish dairies purchase Danish

butter to supplement their own production and retain their customers during the season when they themselves are not in a position to supply them.

The Danish exporters have keen competitors in the large English importers, and since Danish butter is often utilised by the retail dealers as an advertisement and sold without a profit, the middlemen's profit is generally reduced to a minimum, so that the dairies receive a very high price for their butter in comparison with the retail price in England.

The butter is generally sold f. o. b. at the Copenhagen Quotation, which, accordingly, is of extremely great importance. It is fixed on the Copenhagen Exchange by a Butter Quotation Committee composed of wholesale butter merchants. For some years also farmers were represented on this committee, but this is no longer the case. The farmers have now their own quotations.

This matter of quotations for years presented serious difficulties. The quotation did not correspond with the prices actually paid, since the competition among the purchasers led to the payment of overprices, in which the dairy managers had a great interest, since a part of their income depended upon the overprices received. In reality, the effect was to lower the quotation. Repeated attempts were made to remedy the evil, by including the overprice, but every time the inclusion was treated as a real rise in price and as such charged against the buyers, while the overprices continued to exist. These unjustified and disproportionate increases in price excited great dissatisfaction in England. At one time the English merchants quite ceased to buy at Copenhagen quotations, so that these were for a time quite disregarded.

Another result of the system of overprices was that the individual dairies could not learn from the quotation the real ordinary price of butter, which weakened their position in regard to the buyers. On their part, also, the farmers considered the overprices as a menace for the quality of the butter, since these overprices were nominally only paid for specially fine butter, whilst in fact they were everywhere general.

In order to provide a sort of check on the purchases of butter and on the prices paid, weekly returns now began to be made of the prices received by each of the dairies and from these the price of fine butter was estimated. These butter price statistical returns, as they were called, were first started by the farmers' unions in 1894, but soon afterwards were imitated and extended by the newly founded dairy unions; these at first undertook the work each in its own district, but when they had united in a common association they established a common butter price statistical office for the whole country. In 1903 the work was entrusted to the Dairy Statistics Office.

Attempts were made to regulate the matter of quotations by means of various reforms, a continual endeavour being made to increase the influence of the farmers in establishing the quotations. But there was, however, no success in introducing a scientific basis. The quotation, on account of the overprice, continued low and unstable. In 1912 all co-operation between

the farmers and the wholesale dealers in this field came to an end. The farmers started their own quotations. So there are now two quotations, that of the wholesale dealers, established in accordance with news of the changes in the trade conditions in England, and that of the farmers, which is based on the information furnished by the butter price statistical returns in regard to the prices asked and received.

This arrangement has proved successful, for the two quotations do not differ greatly and complete and correct each other, so that a continual increase in the overprices is prevented.

Another danger by which the position of Danish butter in the English market was threatened was the Danish transit trade in butter from Sweden, Finland and Siberia, where Danish merchants have established an important butter industry. This butter, which was less uniform and of considerably inferior quality, was often sold in England as Danish butter or in any case so considered by the purchasers and in this way the reputation of Danish butter suffered.

This excited the wish for a common national trademark for all Danish butter. However the fear of damaging the profitable transit trade prevented legislation to that effect, and so for a long time the realisation of the idea was postponed. Finally an indirect means of realising the desire was found, indeed, with the help of the existing laws, as a single dairy requested authorisation to use a trademark and then gave other dairies the right to use it, while at the same time they bound themselves to take legal measures against any unauthorized use of it. On this basis the "Butter Trade Mark Union of Danish Dairies" was founded in 1900, and in a few years it included all the co-operative dairies. The butter trade mark, called *Lurmærke*, consists of four old Scandinavian battle trumpets (*Lur*) interlaced. The merchants showed themselves favourable to this arrangement, which had been carried out voluntarily. It became also evident that the trademark had a good effect on the sale in England and as a result of a few prosecutions, the unauthorized use of the trademark was put a stop to. It was therefore desired to obtain a more sure position for the trademark in Denmark and greater consideration for it abroad, by getting legal sanction for it and placing it to a greater degree under the protection of the Government. By the Law of March 30th., 1906, on trade in agricultural produce and its exportation, the *Lurmærke* was imposed as the common legal trademark for the country for all Danish butter and by the Law of 1911 on the trade in foreign butter and agricultural produce its position was still better assured, it being prohibited to export butter except under this trademark.

Finally in 1912 it was officially recognised in England, through the action of the Danish Department for Agriculture, as the common trademark for Denmark, and efforts are now being made to give it similar protection in other countries and also to obtain international recognition of this kind of national trademarks.

There is no doubt that the *Lurmærke* is very important, and the idea has been adopted in other countries; so Sweden has the *Rumenmarke* for

Swedish butter and Ireland has introduced an old Irish emblem for Irish butter.

Considerable difficulties were put in the way of the export of butter by the English Butter and Margarine Act of 1907, Section 5 of which forbade the import and sale of butter containing more than 16 % water and imposed fines and provided for the confiscation of all the butter bearing the same trademark in case of contravention. Attempt was first made to induce all the dairies to make their butter conform exactly with the requirements of the English law, since the Dairy Managers' Union strongly desired to avoid legal compulsion. But as the object could not be attained in this way, the Law of 1911, in accordance with the joint desire of the dairy unions and the managers' unions, forbade under pain of fines the export of butter containing more than 16 % water, and the use of the *Lurmarke* for such butter.

The Department of Agriculture can, on the recommendation of the Central Dairy Organization, order those dairies that desire to be authorized to use the *Lurmarke* to enter their butter for the butter competitions organised in accordance with the law by the agricultural experiment laboratories and for the shows instituted by the dairy organizations.

Most of the export is in the hands of Danish wholesale butter merchants and British wholesale importers, but the Butter Export Unions also export considerably ; as we have mentioned, six of them at the beginning of 1913, with an annual sale of about 43,000,000 crowns, exported about one fifth of the total amount of butter exported. That these Unions have not increased more largely is due to the keen competition between the wholesale dealers and the English buyers, which considerably reduced the middlemen's profits, and thereby made the existence of such export unions less necessary. For all that, these unions are very important, since they serve to increase competition and especially in recent years have they been of no less importance in the matter of the quotation problem, as they have supported the farmers' quotation, which is usually a little higher than that of the wholesale dealers. The export unions have been guided in their purchases by the farmers' quotations and thereby have compelled the wholesale dealers to follow the example, if not formally, yet generally virtually, through a supplementary adjustment of the difference between the wholesale dealers' quotation and that of the Statistical Committee. Moreover, they have supplied the quotation committee with information in regard to the conditions of the market and contribute to make the quotations as reliable as possible.

Hence it comes that the export unions seem to provide the most effectual means for obtaining payments really in accordance with the quality of the butter, which would be of the greatest importance for the production of butter. In the present conditions of the butter trade, these unions are certainly of the greatest importance in this connection.

15. THE IMPORTANCE OF THE CO-OPERATIVE DAIRIES, FROM THE ECONOMIC, SOCIAL AND EDUCATIONAL POINT OF VIEW.

The co-operative dairies have raised the price of the butter for the farmers by between 40 and 60 öre per kg. In this simple fact is the key to an understanding of their economic and social importance. This difference in price existed, at the beginning of the ten years 1880-1890, between the butter of the large landowners and that of the peasants. The co-operative dairies have caused the difference to disappear, not only by making the peasants' butter as good as that of the large landowners, but it was seen about the middle of the period 1890-1900 at the shows, that the butter of the co-operative societies was superior in quality, and on the market there was a corresponding difference in prices in favour of the co-operative dairies. At the same time, there was a large reduction in the number of estate dairies, which is the best proof of the economic superiority of the co-operative dairies, and shows that they have taken the leading position in the field of dairying.

It was necessary to eliminate the above difference of price in order that the peasants might advantageously combine with those large landowners who were now abandoning the cultivation and sale of grain for stock-raising and the sale of dairy produce and it would not be wrong attribute to the co-operative dairies the principal merit of the progress realised by Danish agriculture in recent years. This progress might be considered from various sides; its best results are seen in the immense increase of the agricultural exports, which has been one of its effects.

The excess of exports over imports of butter, together with milk and cream, calculated, according to the proportion of butter-fat contained, as if they had been converted into butter, was as follows:

Year	Millions of kilograms	Millions of crowns
Average 1881-1885	11.8	22.6
" 1886-1890	24.4	43.4
" 1891-1895	37.8	69.3
" 1896-1900	51.7	98.0
" 1901-1905	74.8	136.4
" 1906-1910	86.5	176.6
1911	94.6	203.1
1912	92.9	207.4
1913	98.6	217.5

Thus the excess of exports over imports in the 30 years since the production of co-operative dairying has increased tenfold, a result due to several concomitant causes. In the first place it is to be attributed to the increase in the stock of cows, due to the high prices fetched by butter.

The number of dairy cows was:

1881	898,790
1888	954,250
1893	1,011,098
1898	1,067,265
1903	1,089,073
1909	1,281,974
1914	1,310,268

Of still greater importance was the improvement in the quality of the stock which gradually took place. This, together with more nutritious feeding, led to the result that the yield of milk per cow increased in even greater proportion than the number of cows, that is to say from about 1,750 kgs. in 1888 to 2,621 kgs. in 1913.

Finally, it must be mentioned that there has been an increasing use of margarine in place of the home made butter in the country, which, likewise has contributed to increase the export of butter.

Together with this increased exportation of butter there was also an increase in the export of pig-meat (bacon, etc.), which in any case must be considered to a large degree as a by-product of the dairies.

The export of pig-meat was:

Year	Millions of crowns
Average 1881-1885	27.4
» 1891-1895	41.6
» 1901-1905	71.7
» 1906-1910	100.2
1911	119.9
1912	145.0
1913	160.3

It has thus increased sixfold.

The change in the character of agricultural production and the immense increase in the production of animal produce have together resulted in changing Denmark from a fairly large exporter of cereals to a large and increasingly large importer of cereals and cattle foods, and this fact should not be lost sight of in our estimate of the economic importance of the co-operative dairies for Denmark. But the following table will show that this increased importation is far from keeping pace with the increasing export of animal produce, and that the result is an increasingly large excess of exports of agricultural produce over imports of agricultural produce.

Excess of Exports over Imports, compared with the Excess of Imports over Exports, of the Principal Classes of Agricultural Produce and Agricultural Requirements.

	Excess of Exports over Imports			Excess of Imports over Exports			Total Excess of Exports over Imports
	Livestock	Food Stuffs of Animal Origin	Other Food Stuffs	Cereals	Cattle Feeds	Seeds and Manure	
Millions of crowns.							
1881-85 (average) . .	49.8	29.4	5.3	3.1	8.1	5.8	73.6
1886-90	34.5	63.7	5.8	10.3	13.4	6.3	74.0
1891-95	33.4	105.4	4.6	24.8	15.5	7.1	90.0
1896-1900	19.2	161.8	4.1	46.4	19.8	4.8	113.1
1901-05	28.4	229.2	4.1	61.2	30.0	10.4	151.1
1906-10	35.1	297.8	7.1	77.8	57.7	16.6	187.9
1911	50.1	359.4	11.2	78.7	61.7	17.4	262.9
1912	45.7	402.5	15.4	101.3	75.8	22.2	264.3
1913	58.7	427.1	12.8	101.7	82.3	21.8	292.8

If the co-operative dairies have been of enormous economic importance for Denmark, this, considered from another point of view, is only a proof that they have accomplished their social work brilliantly. For this progress of agriculture and agricultural exportation only became possible through the association of the co-operative dairies with the co-operative organizations, which resulted in the small producers — the great mass of the rural population — sharing in the advantages of the large farmers, and that in a country and at a time when this had become for the small farmers in the most literal sense a condition of their existence.

How far this might have happened under other conditions, is perhaps still open to discussion; it is at any rate certain that the dairies worked in common (*Fællesmejeriene*) would have required a considerable time to bring about the change, and during this period of transition there would have been a crisis that would have made Danish agriculture languish and would have been fatal for the small farmers. Indeed the co-operative dairies could not prevent rural land falling in price, as a result of the lower prices of grain, but they protected the farmers, and particularly the small holders, from the baneful consequences, as they rendered possible a kind of production, for which the economic return of the soil was of somewhat less importance and livestock improvement and dairying played the most important part; so that the fall in price of the land meant no corresponding decrease of income for the farmer; on the contrary,

in the case of the very small farmers, it tended to increase. The progress which the co-operative dairies brought about both in respect to dairying and to agriculture generally, and which still further extended and secured the position the small Danish farmers had obtained, could have been realised under no other system, for it was for the most part the result of intense collaboration between the co-operative dairies, such as cannot be imagined among competitive undertakings, or was based on relations of confidence between the dairy and its suppliers such as private business undertakings cannot create.

To this it must be added that the co-operative dairies played an important part as precursors and examples for the numerous co-operative associations formed in other spheres, sometimes also giving them direct support; we must specially mention in this connection the co-operative bacon factories and feeding-stuffs societies.

Hence the co-operative dairies may claim the chief merit for the fact that the small farmers were placed in a position to obtain also in other departments the economic and technical advantages enjoyed by the larger farmers working on industrial lines.

From the social point of view, the co-operative dairies have contributed directly and indirectly to protect the numerous class of small farmers against a disastrous crisis, and assure their economic independence and comparative welfare. At the same time the progress accomplished has been so great that the smaller farmers in the future will have a prominent position not only in agriculture but in industry and social life generally.

In this last field it is not the least merit of the co-operative dairies that in common with other associations, they have done much useful educational work among the country population. Through the claims the co-operative societies makes on the intelligence and capacity of the population, they have become an educational factor of the first importance, as well as by the fact that they encourage the population to associate voluntarily and effectively and submit to a common organization. In this respect, the co-operative movement is certainly in close relations of mutual influence with the educational theory that has found expression in the Danish popular high schools and agricultural schools. Both these classes of schools for young men are based substantially on a the same principle, and attempt to realise the twofold object of raising the moral and religious tone and increasing the vitality of the people, and also of developing their intellectual and technical capacity. To these schools is due a great deal of the merit that the co-operative movement has developed so rapidly and so brilliantly, as they provided the educational foundation, but, on the other hand, the co-operative movement has been one of the principal causes of the desire for education which has made itself in the Danish country population, and is apparent in the increasing number of young men who enter the high schools every year.

FRANCE.

AGRICULTURAL LABOURERS' TRADE UNIONS ACCORDING TO A RECENT PUBLICATION.

On the eve of the outbreak of the European war, Mons. A. Souchon Professor of Law in the University of Paris, published an important work entitled *La crise de la main d'œuvre agricole en France* (1 vol. gr. in 8vo., pp. 552, Paris, Artur Rousseau, 1914).

This work, to the preparation of which much time was devoted, was doubly important, because M. Souchon had for a long time directed the studies of his pupils into the same channel. From this many interesting essays resulted, for instance that entitled *La protection légale des ouvriers de l'agriculture italienne* (Paris, 1913) by M. Léon Audoly. M. Souchon's book utilises and condenses all previous works on the subject, thus dispensing the student from the necessity of consulting them, though the author never fails to give the names of his authorities. He gives a complete summary of the condition of the question on the eve of the European war, *i.e.* just at the moment when this question must be considered as entering upon a new phase.

M. Souchon's work is in four parts: rural depopulation, agricultural strikes, the life of agricultural labourers, and their protection by law. We shall here speak only of trade unions among agricultural labourers.

§ 1. WOODCUTTERS' SYNDICATES.

Till the end of the 19th century the question of trade unions had never arisen among French agricultural labourers, and it seemed improbable that it would ever arise, because these labourers were isolated from one another, leading the same life as their employer, working with him and eating at his table. It was among the woodcutters of the central parts of France that the question first attracted attention. The position of these woodcutters seems to be somewhat peculiar. According to Mons. Souchon they are only employed in the woods for a part of the year, unlike those of other districts, for instance the Côte d'Or and the Vosges. During the months of November and December they are occupied in felling trees, and for a fortnight in spring in barking them. This trade not being exer-

cised continuously, a woodcutter must have other means of support. He is generally also an agricultural labourer. But in some woods especially those of Cher, factory hands or village tradesmen out of work are sometimes employed, not however by the proprietors, but by dealers in wood,—middlemen who date their origin from the later years of the Second Empire. Labour contracts between these dealers and the woodcutters are made after a special form according to an ancient custom. The employers do not select their workmen, but the dealers make known in the neighbouring villages the day on which the wood-cutting is to begin, and at the appointed time workmen from the neighbourhood present themselves and inquire what wages are to be paid. These are always task-wages, and as soon as the amount is stated by the dealers anyone may come and set to work, claiming his share of payment at the end.

Now, as M. Souchon remarks, this plan may easily give rise to disputes. In the first place the woodcutters have a confused idea that the forest is their property by a sort of natural right, and in the powers delegated by the proprietors to the dealers, they are disposed to see an encroachment on their rights. Besides this, the character of middleman assumed by the dealers is not calculated to attract the sympathies of the workmen. Lastly, the labour in common brings together many men of different ideas among whom there are often factory workers already familiar with the syndicalist movement, thus adding to the causes of agitation.

Towards 1891 there was a considerable depreciation of wages, due in the first place to the great number of dealers and the consequent competition which obliged them to pay high prices to the proprietors and to recomp themselves by economising in wages. In the second place there was less demand for wood, owing to various causes, but chiefly to the decline of merchant shipping and the substitution of iron for wood in naval construction. With regard to wood for burning, its consumption was reduced through the competition in new appliances in which coal was used.

The insufficiency of wages led to strikes, the first of which were not planned by any pre-existing organisation, but during the cessation of work syndicates were constituted. In June, 1892, fifty syndicates in the department of Cher alone met in a congress, and claimed to represent more than 6,000 workmen. In the course of two seasons, 1891-92 and 1892-93, the workmen succeeded in having their wages nearly doubled.

The agitation spread to Nièvre in 1892 and there also resulted in the constitution of syndicates.

But here the movement stopped, for reasons well explained by M. Souchon. Of these, the first was the very result obtained, so far beyond the highest hopes that the workmen did not see the necessity of continuing to belong to associations which seemed to have no further object. Besides, the syndicates had enemies even among the woodcutters, who made an active propaganda against them, encouraged by the proprietors. At first the difficulties directly affecting the dealers in wood seemed to have no interest for the proprietors, but they soon perceived that the strikes would naturally increase the cost of cutting the wood and

ms diminish the offers of the dealers, while the syndicates of woodcutters proclaimed their intention to extend their demands to all agricultural labour. This was enough to cause much uneasiness and to evoke a desire for self defence. But soon the syndicates had difficulties from within with regard to subscriptions. In summer when the workmen were no longer in the forest they neglected to pay their quota, and when the season came round again they found it hard to pay up their arrears.

Thus the syndicates rapidly disappeared, but in 1902 under the auspices of the General Labour Confederation, the Labour Exchange of Bourges organised a congress of woodcutters at which the foundation was laid of a *National Federation of Labourers on the Land*. At present this federation comprises 170 syndicates, of which the greater number belong to the central parts (66 in Cher, 26 in Nièvre, 15 in Indre, 15 in Yonne, 14 in Allier). There are also groups belonging to the federation in the most widely separated districts, and except Morvan and the Vosges, there are few forest districts unrepresented.

The woodcutters' syndicates acted not only through strikes but also tried to work by appealing to the force of the law and by the extension of co-operation, but M. Souchon believes that these efforts were merely secondary. They sought legal intervention to secure the extension of the laws respecting the labour of women and children to agriculture, to claim for labourers in the State forests the application of the decrees of the 11th October, 1899, respecting State contractors, and to obtain the appointment of agricultural experts. The syndicates have often demanded that the State should manage its own forests directly through its own agents, the exclusion of dealers facilitating the formation of co-operative societies of woodcutters. The woodcutters' syndicates have in fact taken up the question of co-operation, and in 1905 at their annual congress, they drew up a vast programme of co-operation for consumption and for production on a basis of communism. Souchon considers that hitherto the results have been very small. With regard to consumers' co-operation he refers to the *fraternelle* of La Guerche, and the *France Bûcheronne* of Jussy-le-Chaudrier. As to production, only one interesting effort has been made, that of the syndicate of *Chateaucuf-Val-de-Bargis* in Nièvre.

Every year collective contracts are drawn up in the following manner. Three or four months before the wood-cutting begins the syndicates send delegates to their various districts to bring back a list of prices for all the work to be done. This list is examined by the bureau of the syndicate and serves to fix a tariff, but each group has its own tariff according to the differences in labour conditions.

These tariffs are made known to those concerned by means of placards, insertion in the local papers or notifications to proprietors, among whom the State is included. Dealers are thus informed of the claims of the workmen before purchasing standing trees from private individuals or sending in a tender at a public auction. When the time has come to set to work the employers make their offers, usually lower than the tariff of the syndicate. After a discussion more or less prolonged, a collective agreement is made, the

clauses of which are not generally confined to the promises made by the dealers of a fixed sum for each job. The syndicate is accepted as the contracting party with whom to treat for the execution of the work, and with whose delegates the measurements must be made. Sometimes the syndicate even undertakes the responsibility for certain malpractices, such as the felling of trees that ought to be left untouched, or the encroaching on adjoining property.

Souchon also shows that the obligations of employers are often very heavy. For instance the syndicates desire to have none but their own members in the forest. But as we have seen, the wood-cutting is open to all comers so that the dealers cannot be required to exclude non-syndicalists. But it is pointed out that the increase of wages being due to the efforts of the association it would be unjust that workmen who have given it no assistance should share the advantages. Therefore the dealers must pay the non-syndicalist according to a lower tariff and hand over the difference to the syndicate. The amount thus saved is usually considerable; often rising to 15 per cent. of the wages, and imposing on non-syndicalists a heavy fine, the prospect of which is an indirect method of recruiting.

The incontestable effect of the action of the workmen in raising wages could not continue unchecked.

In the first place it shortened the forest season. Formerly there was work for the woodcutter in the forest for two months of each year, but for the last fifteen years there has been work only for four or five weeks, because the time occupied in cutting down trees is now in many places reduced by one half. One reason for this is that the high wages attract a larger number of workmen and the work is therefore finished sooner, and another reason is that the cutting takes place less frequently. When the forests of Central France belonged to individuals the trees were cut down about every 15 years, now the period tends to be prolonged to 20 and 25 years. Thus the diminution of work for wood-cutters, though no doubt partly caused by economic conditions affecting the price of wood, is also owing to the action of the syndicates in raising the cost of labour.

The business of barking the trees, which yields to woodcutters the highest wages, is in somewhat the same condition. Twenty years ago all the proprietors dealt in bark, but of late the price of oak bark has continually diminished, chiefly because of industrial changes which have introduced new methods of tanning. Owing to the exactions of the syndicates the bark trade now yields no profit, and the proprietors are giving it up.

The syndicates try to exclude women and children from work in the woods. Formerly the woodcutter was aided by his family in accessory tasks. But as the demand for adult male labour was thus lessened, and a lowering of wages was likely to follow, the trade unions naturally oppose the custom, but could not abolish it without provoking much recrimination and introducing changes often burdensome to the families.

At length the associations of working men found themselves opposed by strongly organised unions of employers such as the *Syndicat du Centre*

and the *Syndicat des propriétaires du Nivernais* described by M. Souchon. The first, dating from 1903, comprises the proprietors of a great wooded district near the junction of the Allier and the Loire, from 25 to 30 kilometres in length. Here the syndicate has been accepted almost unanimously, because a conflict with it would deprive the inhabitants of employment, and oblige them to leave their homes. It has used its power systematically and has obtained considerable results. Unlike other districts, for instance Nièvre, it refuses agreements with the workmen. Its object is to give the dealers the means of dictating reasonable terms compelling them if needful to act with the energy indispensable in the interests of the work. With this view the syndicate has taken as a basis the wages of 1907, not attempting to go back on the increase then obtained, but merely to arrest a rise. But it has not adopted a uniform tariff, because the work has many different aspects, according to the situation of the woods and the age of the trees. Every year in the month of June the proprietors send to the secretary of the syndicate a list of the woods which they propose to cut down in the autumn. A commission composed of proprietors and dealers visits the woods named, and fixes the amount of the wages for each kind of work. The syndicate meets at the end of August and sanctions the tariff which must not again be altered, and must be accepted by proprietors working on their own account. If a proprietor should sell his trees he must insert a clause in his contract obliging the buyer to have the work done at this rate, with heavy fines in case of breach of contract. The proprietors, foreseeing that workmen may be tempted to boycott a certain wood in order to frighten the owner and detach him from the association, reply in anticipation by an affirmation of solidarity among themselves: "Should the trees which are to be felled remain standing after the 15th February through the refusal of the woodcutters to accept the tariff of the commissioners on the terms of the syndicates, no work shall be begun the following autumn within a radius of 4 or 5 kilometres from that wood till the felling is begun and going actively forward." It may be added that within its own sphere the *Syndicat du Centre* seems to have acquired control over the forces of the workmen and to have imposed its will upon them within certain limits.

The *Syndicat des propriétaires du Nivernais* has its headquarters at Nevers. It comprises a certain number of sections, the limits of which are determined by uniformity of cultivation, each section being independent of the others. Each may fix within its own limits the wages to be paid each season. Above them is a council of five members, to which may be added all the presidents of sections, with the duty of guiding concerted action. This syndicate has one function which is extending and growing stronger, that, namely, of ensuring advances of money to those of its members who may be in need. To facilitate this it has founded a mutual credit bank, and it is planning co-operative societies for the sale of forest produce. The object of the mutual credit society is to lend money to its members under the ordinary conditions of agricultural credit. The co-operative societies for cultivation and sale have some curious regulations. They give to every member "the right to bring to the societies either the

standing trees or the produce." The co-operative societies may work on their own account or sell to a dealer. To the proprietors an immediate price is guaranteed when they have not been able to have the trees felled.

* *

M. Souchon has also given particulars of two other branches of the wood-cutting industry, that of the making of hoops for casks, the *fenillard*, and that of the *resinard* or collecting of resin.

The hoops are made from chestnut-wood and associated with this occupation is that of the cutting of stakes of all kinds for vines, etc. The principal centre of this work is in Haute-Vienne, Dordogne and Corrèze especially in the districts of Saint-Yrieix and Noutron. There are about 2,500 men employed, and these, as in the woods of Nièvre and Cher, work in the fields as well as in the forests where they spend about eight months of the year (from October to June).

Increasing difficulties hamper this industry. First ravages of the phylloxera diminished the demand for casks; next, iron hoops were introduced which last four times as long as those of wood. A lowering in wages followed and led to the formation of workmen's syndicates of which there are now more than 150 divided into twelve groups. These syndicates are not independent of each other, but form the *Union ouvrière des chambres syndicales des fenillardiers de la région de Saint-Yrieix et du Centre*. Since 1900, they have succeeded in raising wages 40 to 50 per cent. They also include in their scheme a benefit system. In 1907 the syndicate of Saint-Yrieix, notwithstanding very precarious resources, promised a sum of 15 francs with an addition of three francs for each of his children to any member whose habitation had been destroyed by fire. Also to the demands of these syndicates is due the establishment of a council of experts in the district of Saint-Yrieix. We shall now describe some attempts at co-operative production.

* *

The condition of the resin collectors in the vast pine forests of Landes is very different. Besides their employment in the forests for the greater part of the year, namely, from February to October, they have other sources of gain, one being small agricultural holdings, sometimes as proprietors, sometimes as tenants, generally as metayers. To understand their economic situation, we must be acquainted with the amount of their wages and the proportion of the produce to which they are entitled if metayers. According to M. Souchon, their condition in 1906 before the first strikes was as follows.

The resin season may produce about 600 francs, to which must be added wages averaging from 3 francs to 3.50 per day during the three months

of the felling. The conditions of agricultural metayage vary according to the district, the commune and even the holding, as we may see in Marensin (a coast region to the north of the department of Landes), the Grande Lande (part of the resin forest farthest inland) and the Born (a coast region to the south of the department of Landes). In the last two districts the customary rule is equal division with only a small payment in kind of the part of the metayer. In the Marensin the metayer usually receives more than half of certain products. Sometimes this is three-fifths, sometimes three-quarters, sometimes two-thirds of the crop of wheat, maize, beans or oats, and the profit arising from cattle is alone divided equally.

Thus, taken altogether, the condition of the resin-workers, even before 1906, was preferable in a great degree to that of the woodcutters of Nièvre and Cher.

At the beginning of 1902, the price of resin, which up to that date had never exceeded 70 francs per hogshead, rose until it reached 120 francs in 1906. For this advance there were several reasons. The wood of the Landes was in great demand for railway sleepers and for props for mines, so much so that proprietors cut down their trees, thereby causing a decrease in resin production. Prices rose also from a trust and from the increased use of turpentine and colophony.

The dearness of resin raised a problem in the matter of wages. Those of the workmen who received half the profits gained considerably, while those who were paid by the job gained nothing. Thus arose complaints, strikes and the formation of syndicates.

In 1885 there was some attempt to establish workmen's clubs, and during the following twenty years occasionally and from various reasons such associations were formed, never, however, being more than of a temporary character. At the close of 1905, at Lit-et-Mixte in the Marensin, the first important syndicate was established. In 1906 all the district and likewise that of Born followed the example thus given. At the beginning of 1907, at Morceux, a first congress of resin-workers was held, 32 associations being represented. From this congress arose the *Fédération des syndicats de fermiers, métayers, résiniers et parties similaires de la terre landaise*. Several claims were formulated by this congress. Its first claim was that of an equal division of produce between the proprietor and labourer, whatever might be the price of the resin, another was that proprietors should employ only members of syndicates.

Other demands were relative to the lands held by metayers who were also resin-workers.

The congress required that at least when he had provided the labour the metayer should have $\frac{3}{4}$ of the harvest in cereals, the whole of the fodder and half of the straw not necessary for use in the farm; payment in kind to be replaced by a payment of 20 francs annually for small farms and 30 francs for larger; no day in future to be gratuitously given to the proprietor, and the work of the metayer on the farm to be strictly defined before being done.

Such demands were certain to produce conflicts and in 1906 strikes

began. From the end of 1907 throughout the whole region collective contracts prevailed of which although the clauses were far from uniform, all had some common features. To disentangle them, there must be distinction made between wages for the resin-work and payment by participation in the profits of the farm. With regard to the first it seldom happened that the syndicates obtained without some reserve, an equal division of the profits of the resin-work. More frequently a special arrangement was made. It was understood that the shares should be equal up to a certain price, beyond which the share of the worker was to be reduced either to $\frac{1}{4}$, or to $\frac{1}{3}$. There are various other clauses in the greater number of agreements. Thus, almost always, we find the question of the carriage of the resin to the factory. Generally the expense of this carriage is equally divided between the workman and the proprietor up to 1.50 fr. or 2 fr. per hoghead; beyond this price, the payment falls on the employer. Sometimes also the employer pays the total sum when the price has not been fixed, equal division being made only when it exceeds the above mentioned rate. Several syndicates have also obtained the right of planning for the work of the year from the month of December or at the furthest from January. Some have even exacted from the proprietors a promise to exclude all non-members of syndicates, but this is very rare. Under the conditions of agricultural tenure a difference is made with regard to the metayer who uses the proprietor's team and one who does not. In the first case he receives half the profit; in the second he receives three-quarters. In many instances there are clauses for the suppression of payments in kind and for statute-labour to be replaced by payment in money.

In the majority of cases all the straw is required for the farm; if there should be a surplus, it is to be divided in the same proportions as the wheat. Many contracts grant the metayers the wood used as fuel and sometimes even that for the working of their threshing-machines.

The tendency to facilitate matters is undoubted, and according to M. Souchon this is due both to the proprietors and to the resin-workers. There are also mixed syndicates. The earliest of these, founded in 1907, is called *L'Union syndicale des propriétaires et résiniers de la commune d'Onesse-Laharie*. Its success will be recognised in the fact of its having formed a pension fund of nearly 100,000 frs. from a light tax on every hoghead. The proprietors of Onesse-Laharie have besides made ample concessions to their workmen, for by the rules of their association the principle of equal division prevails in every case with only a small indemnity to proprietors for supplying pots and hooks when the price of the hogs head exceeds 60 frs. At Soustons, soon after, there was founded the *Société co-opérative et philanthropique à capital et personnel variables*. This is a true mixed syndicate since it announces that its aim is "to safeguard all interests pertaining to the forests of the commune, and to facilitate the relations between the proprietors and resin-workers, maintaining them in harmony together." The conditions of wages are nearly such as we have described.

The workmen's federation however continues to exist, and its congresses are regularly attended. At that held at Castets in December, 1912

seventeen adhering syndicates and four independent groups were represented. Attention was given entirely to State forests. Some years ago the workmen obtained numerous favourable changes in the administration of the forests but their ambitions are not yet satisfied and they aim at bringing all the woods of the district controlled by the Forest Department into line. To this the Department continually makes objections, giving as a reason that there are not sufficient workers nor sufficient credit for access. They say besides that the State would be much burdened by the necessary purchase of working materials (casks, pots, hooks, etc.) and embarrassed in the sale of the resin which is injured by long keeping.

State forests would be worked under contracts of considerable importance which would be disadvantageous because of the many facilities offered in combination among buyers and the resulting loss to the Treasury. His system would give only half the profits to the workmen, with which they would probably be dissatisfied.

§ 2 VINEDRESSERS' ASSOCIATIONS.

Vine culture, after that of textile plants, has always been in France the branch of agriculture most remunerative to the cultivator.

Since the invasion of the phylloxera and the replanting of the vineyards, requirements for successful culture have greatly increased, one, as an instance, being the use of sulphur and of sulphate. There is more work to be done, and that the farm servants may not suffer in consequence many day labourers must also be employed. M. Souchon points out the distinction between work in vineyards and other work.

The vineyard labourers have a hard time. They work from sunrise till sunset with an interval of three hours for rest. This represents twelve hours per day at the beginning, becoming less however as the days shorten. Sundays are not exempt, and the only days of rest are those when all work is prevented by rain. Some years ago time-wages were the rule, but during the last seven or eight years attempts have been made to introduce task-wages. The wages vary in character. Vinedressers strangers to a locality are in the first place lodged by the proprietor who employs them. They sleep in a loft on a little straw, but such meagre hospitality can scarcely be considered remuneration. Sometimes their travelling expenses are paid and they are given their evening meal and wine. But their payment is generally made in money. Women grape-cutters receive but half the sum paid to men, but the men are expected to carry the grapes.

For both men and women payments differ with seasons, districts and even vineyards, but on an average, men receive four francs per day and women two francs per day, a rate which seems sufficient to allow of some saving by the recipients who for the greater part are mountaineers accustomed to lead a very frugal life. Yet they often spend much during their stay of three weeks or a month in the vineyards, and so have but little to take home.

The day labourers who live in the country and work there all the year round are very differently situated economically and socially according as they are or are not proprietors and according to the size of their holdings. Those who possess perhaps a bare hectare of land cannot have such profit. Their crop is small from want of needful capital, and their wine is impaired by bad cellarage. Always in need of money they sell at disadvantage. Sometimes also they are indebted to a neighbour for help, for the loan of a horse, or for implements. Therefore it is not surprising to find in case of a strike that these small proprietors range themselves on the side of the workmen rather than on that of the employers.

With a larger holding the situation is less difficult. The owner of a vineyard of two or three hectares generally owns a horse, which is to him a source of much benefit. In a large number of cases, the proprietor shrinks from the expense of keeping a horse. When he has need of one he applies to his neighbours and pays relatively highly for the service rendered. However, the holder of from two to three hectares is no longer obliged to work for others, and if he does so occasionally he is usually well paid.

Other day labourers often remain connected with the same property for months and even years but not continuously, for they are only called when there is extra work to be done. M. Augé-Laribé, quoted by M. Soucho, calculates that such a workman is generally employed 230 or 250 days annually. To them the care of the more delicate work is entrusted. They are employed in pruning, grafting, sulphur and sulphate spraying of the vines: the women at easier work, such as the tying-up of the vine shoots or, at the time of spraying, the re-filling of the cans. As the women are so poorly paid, proprietors are often tempted to employ them instead of men. For this reason, the men protested energetically against the employment of women and often succeeded in preventing it.

Ordinarily, to get through the tasks allotted them more quickly, the vinedressers unite in groups called *bricoles* led by a chief workman called the *moussègne*. This collective work, like that of the woodmen in the forests, has much aided the development of syndicates.

The working hours of day labourers in the vineyards are short, but seldom more than eight. Their wages kept constantly rising from 1870 until the appearance of the phylloxera, and then from 1875 they began to go down, until in five or ten years they reached a proportion of about 50 per cent., and they would have been lower still but for the exodus of many of the workers. With the replanting of the vineyards better times came but no years have ever been comparable to those between 1850 and 1870 for prosperity. In 1900 and the years following there was another fall in wages owing to the failure in demand. In April, 1903, hard frosts destroyed the vintage of the year, and employers dismissed many of their workmen while they abruptly cut down the wages for the others by 30 or 40 per cent. In Hérault M. Soucho believes that he is near the truth in stating that in 1913 the ordinary daily wages in winter were 2 fr. 50, and in summer from 2 fr. 50 to 3 fr. 50. These figures seem very low when we remember that there are frequent intervals in vineyard work. Besides, the southern

labourers generally live in the cities or large villages, thus losing the advantages of a completely country life, one of which is the profit made on pig or poultry rearing. Their rent too is high, being calculated by M. Augé-Laribé at an average of 80 to 120 frs. Lastly, the continual cultivation of one kind of crop is prejudicial to the interests of the south through the risk of over-production, and it is also one cause of the higher cost of living. Bread, for instance, is a much heavier item of expense to the vinedresser in the south than in any other part of France.

On the 15th August, 1903, a first congress of vinedressers and labourers held at Béziers comprised 31 syndicates. In the following November the first strike of any importance was declared, and resulted much to the satisfaction of the workmen. In January, 1904, agitation increased, spreading from Hérault to Aube and Pyrénées-Orientales, and in April and May of the same year to Bouches-du-Rhône. According to the statistics of the Labour Office, more than 150 strikes of vinedressers took place between November, 1903, and May, 1904, affecting about 50,000 strikers. From a strictly economic point of view the workmen obtained considerable advantages, of which the chief was an increase in wages. But it is difficult to know the exact importance of the results of the congress, because the movement has entirely failed as to unanimity in its requirements. M. Augé-Laribé shows that usually the increase of wages varied, carrying them towards what they were before the frosts, from 25 to 50 or even 70 centimes per day for the same number of hours or even for fewer hours. At Montpellier and Arles the strikers seem to have been most successful, for in both these cities the proprietors engaged to pay at the rate of 0.50 per hour, and this afterwards came to be the payment claimed by the syndicates. In Pyrénées-Orientales wages rose to 3 francs per day of six hours and 3.50 frs. for a day of 7 hours which gives results equivalent to the tariff proposed by the syndicates with a few differences as to hours.

In Aube where wages were always lower, the new prices were generally 2.50 francs per day or 35 to 40 centimes per hour.

The question of wages was not the only one under consideration, — that of the evils resulting from the long intervals in the work of the vineyards calling for special attention, and the syndicates proposed various plans as a remedy. They also proposed restrictions upon the employment of outsiders, of women and of children, and prohibition of extra hours and of work by the job, — all with a view to retaining the work for themselves. But on these points success did not follow as in the case of day labour, and the little obtained was very incomplete. At first many agreed to the prohibition of women's work, except for the replenishing of the sulphur cans, and some of the proprietors agreed to employ workmen of the commune. It was invariably specified that extra hours should be paid at the same rate as the daily work, a notable improvement, as proprietors had hitherto expected extra work on pressing occasions to be done either gratis or for a very small remuneration.

Unhappily these good results were very precarious. At first the proprietors had been taken by surprise and they soon sought means of retaliation.

tion. The judicial forms stating the agreements were generally very inexact, and a strike was seldom ended by a true collective contract. Generally the workmen were satisfied with a written minute, trusting for modifications to local usages, with nothing to show that the parties were bound by any legal obligation. This proved to be the germ of new conflicts which were not slow to break out.

A second congress of southern workmen was held at Narbonne on the 13th, 15th and 16th August, 1904. At this congress 107 syndicates were represented: 52 from Aude, 41 from Hérault, 11 from Pyrénées-Orientales and 3 from Bouches-du-Rhône. The members seemed very much struck by the diversity of claims and the results obtained since the last strikes. Without taking into account that the customs and economic conditions are not identical in all the vine-growing districts of the south the congress laid down a uniform system of regulations for all. But while this programme was far beyond the results already obtained it must be acknowledged that it was in great part a failure. Since the winter the demand for wine had been small and the proprietors felt the impossibility of employing many workmen under the conditions imposed upon them. And partly from necessity, partly in retaliation, they dismissed many of the workmen they had engaged, and left hundreds of day labourers without work. When they consented to re-engage them, it was at a lower rate.

The question for the syndicalists was then to insure respect for the agreements already made, and to obtain new concessions, unattainable without further struggles. So the question was put to the congress at Narbonne, whether the time had not come for a general strike of vine-dressers. The idea was approved, but referred to the Federal Council which proclaimed the strike on December 1st, 1904.

It proved a failure, and was fatal to the prestige of syndicalism in the country districts of the south. A rapid diminution in the number of syndicates and syndicalists was soon observed. In 1904 the Vine-dressers' Federation comprised 145 members and 14,084 subscribers; the year 1905 closed with 157 syndicates and 5,551 members; the year 1906 with 143 syndicates and 3,366 members, at the end of October, 1907, there were only 109 syndicates and 1,721 members.

At the same time, the surviving organisations seemed to lose interest in the movement. We have seen that at the congress of Béziers in 1903, 31 syndicates were represented, and at Narbonne 107 in the following year. At the congress of Perpignan in 1905 only 77 organisations were represented and this number fell in the following year to 56 at the congress of Arles. In 1907 at another congress of Béziers, the syndicates were still less active. So little zeal did they show that the time of meeting was put off and when convened for the 2nd and 3rd November only 43 syndicates were represented.

According to M. Souchon, there are many reasons for the diminution of the syndicalist movement in the south since 1904. Some of these must be sought in the heart of the trade unions. Many of those who joined them at first were attracted by the excitement of strikes, and if these were brought to a satisfactory conclusion, it seemed to the men that syndicates could be

of no further use. Among the syndicalists, dissensions, sometimes on political questions, sometimes regarding the subscriptions however small they might be, frequently occurred, precluding any effectual action in common. To these causes of decline may be added the economic conditions of vine-growing in the south of late years. When demand fell off labourers were less needed. In prosperous seasons great care was taken of the vine-stocks, and many improvements were tried, but when a crisis occurred the proprietors reduced their general expenses as far as possible, even at the risk of diminishing production. At such times the labourers begin to understand that there is no opposition of interests between their employers and themselves, and they are more disposed to union, especially in the desire to combat fraud. At the congress of Narbonne, one of the earliest, this question was debated, and since that time the workmen have more than once claimed the honour of having been among the first to oppose fraudulent dealing. In 1905 the syndicate of the small wine-growers of Béziers took the initiative in convening another congress, to comprise not only wage-earners, but also vine-growers of all classes. About 40 workmen's associations were represented, and their delegates met together with those of syndicates of employers or mixed syndicates and of chambers of commerce and other civic organisations. The congress appointed a *District Committee for the Protection of Vinegrowers*. Other similar committees, were nominated and the result was the *Vine-growers' General Co-operative Society* with branches in nearly every commune.

This is an immense mixed syndicate, the object of which is "to study the interest of its members, whether economic or social, connected with vine-growing or agriculture." To attain this, appeal is made to all willing persons. It calls upon "each of its sections to establish and maintain among its members relations of friendship, dignity and mutual justice." It states that its aim is "to exercise a happy influence over the relations between capital and labour, in the hope that the labourers will take into account the solidarity of the proprietors with regard to them."

This confederation has had considerable success, and M. Souchon regards it as the chief cause of the decay of the original syndicalist movement.

But other causes have contributed to the same result. Southern workmen are less tempted by strikes, because much can be obtained without them. Since the increase in the price of wine many proprietors willingly pay their workmen 50 centimes per hour, a sum formerly regarded as a maximum, and there are often special indemnities, either on account of the high cost of living or for performing specially hard work. Another cause is that the small proprietors are rapidly increasing in numbers. Before the phylloxera crisis they were very numerous, but owing to that calamity they almost entirely disappeared.

In spite of the more systematic character of the new mode of cultivation a labour conquest of the land was begun, but interrupted by the frost of 1903 and still more afterwards by a failure of demand. At the present time subdivision is reappearing. The employers are more energetic, and though they have no organisations comparable to those of the forest prop-

rioters described by M. Souchon, yet more than once strikers have been met by a well concerted opposition. In 1912, at Ouveillan, in Aude, there was an attempted strike. The employers collected all the men who were willing to work, and formed them into strong gangs, thus frustrating all efforts at intimidation. Then they hired all the habitations in the village as the leases expired, and succeeded in forcing the ringleaders to go away by refusing to take them as tenants. At Thégan-les-Béziers, in Hérault, there were strike-breakers who went in succession to all the lands abandoned by the workmen. At Vauvert in Gard there is a company for mutual insurance against *sabotage*, which seems to have been the means of considerably diminishing the number of acts of violence. At Marsillargues in the *arrondissement* of Montpellier harmony was restored through the constitution of a co-operative society for the warehousing and sale of wines. All the workmen proprietors have an interest in joining it to secure a better sale of their produce, and they are thus withdrawn from the workmen's syndicate which moreover does not admit any members of the co-operative society. Doubtless, these are only isolated facts, but M. Souchon does not hesitate to regard them as symptomatic of a new era.

Except in the south there are few syndicates of vinedressers. But in Marne some local syndicates arose in 1911, more especially at Hantouilliers and Cumières; and towards the close of the same year a *General Syndicate of the Working Men of Marne* united in itself all the existing organisations, and was about to increase their number.

At a congress held at the end of 1912 at Cumières 40 workmen's associations were represented, of which the total number of members was calculated at 1,400. Strikes soon arose, but they were neither numerous nor serious. In more than one place, without any cessation of work, collective contracts were made, especially at Rilly and at Ay. In these agreements the workmen did not obtain all that they claimed: for instance they demanded equal wages for men and women, the abolition of piece-work, and a uniform rate of wages for the whole district.

Nowhere have they obtained their full programme, but daily wages have been increased. For summer work, except for the vintage and certain particularly delicate tasks, the usual rate, up to the last few years, was from 3 francs to 3 francs 25 for men and 2 francs to 2 francs 50 for women. This rate has been more than once exceeded in new collective agreements.

But M. Souchon does not believe in a brilliant future for workmen's syndicates in Marne, because the number of small proprietors is too large in a department where 15,000 hectares are divided among 15,000 possessors. And if we remember that at least 3,000 hectares belong to large commercial houses which for several years have been making important acquisitions, the figures given must mean minute subdivision.

The very small proprietors in Champagne at certain times have many grievances. The cost of cultivation is very high, rising when the crop is good to a minimum of from 3,500 fr. to 4,000 fr. per hectare, and often higher. But low prices and poor crops do not ensure the cultivator against a recurrence of this high rate. Now the vine is capricious and prices are

regulated by the higher branches of commerce. This condition of things led in 1902, to the creation of a *Fédération des syndicats de la Champagne* with an official organ entitled *La Champagne Viticole*. The aim of this federation was at first to check fraud, and to create district banks to help vine-growers who might be obliged to sell at a disadvantage. But it also seeks to promote "l'entente cordiale through trade by sending a commission at least a week before the vintage to treat with buyers as to the price of the crops. This commission is to be composed of one delegate for every large crop." In this there is the germ of a combine of a sort treating with the large houses on terms of equality, and ending their economic predominance in buying, but hitherto the attempts at negotiation in order to arrive at a collective agreement have met with but little success.

To the workmen, as to the large firms, *La Champagne Viticole* willingly extends the olive branch. Its editors continually affirm that the wages are insufficient, but at the same time they try to point out the difficulties under which small proprietors labour. They preach patience to the one and generosity to the other. But are their appeals heeded? In any case it is certain that the working class movement among the vineyards of Champagne may thus far be considered of secondary importance.

§ 3. THE DISTRIBUTION OF THE SYNDICALIST MOVEMENT.

Besides treating of woodcutters and vinedressers, M. Souchon has turned his attention to the metayers of the Bourbonnais, who at the close of 1905 founded a *Fédération des travailleurs de la terre et parties similaires de la Région bourbonnaise*, now dissolved, and to the agricultural labourers of the Paris district who constituted, in June, 1907, a *Fédération des ouvriers agricoles de la Région du Nord* which was dissolved in 1910. Only one, the *Fédération des ouvriers de l'horticulture* still retains its importance, especially in Paris and its suburbs.

Finally, in the greater part of France up to the outbreak of the European war there had been neither syndicates nor strikes of agricultural labourers. In the west this was true of Brittany, Normandy, Anjou, Touraine, Vendée, Poitou, Charentes and Bordelais as far as the boundaries of the resin country. In the south only those departments devoted solely to vine-growing were affected, and of the whole plain of Toulouse, of Var, Alpes-Maritimes, Vaucluse, Drôme and Bouches-du-Rhône, excluding the Camargue because of its vineyards, nothing is to be said. In the east, Savoy, Dauphiny, Bresse, the Mâconnais, Jura, Lorraine and Champagne have also been untouched. In the north the syndicalist movement did not pass beyond the Paris districts. Lastly in the centre, Berry, Limousin and Auvergne did not follow the example either of the Nivernais or the Bourbonnais, though both were near neighbours.

Passing from this geographical division to a consideration of the question according to occupation, M. Souchon perceives similar restrictions, and

it is remarkable that in country districts, strikes and syndicates have always been the work of specialists, rather than of agricultural labourers in the usual acceptation of the word.

Rural syndicalists are for the most part vinedressers, woodcutters and gardeners. In their ranks may also be found metayers of the Bourbonnais, day labourers of Ile-de-France, and even some farm servants of the Centre, but these form only a small minority in the whole of rural syndicalism.

Even where syndicalism has been most widely extended, it has never reached the whole field. Among gardeners the agitation was especially in Paris. Among woodcutters, Nièvre and Cher alone were touched; in the Morvan and the Vosges there were no syndicalist woodcutters. With regard to vinedressers the syndicalist movement was localised in Champagne, Beaujolais, Hérault, Gard, Aude, Pyrénées-Orientales: it never penetrated into Bordelais or Burgundy.

In all there may be 642 workmen's syndicates in agriculture, forestry, fishing and cattle-rearing, comprising 60,724 members, that is only 2.22 per cent. of the whole number of wage-earners. But this figure is certainly too high, for in a syndicate there are always many doubtful members paying their subscriptions very irregularly, whom there is a temptation to include in the association to give it more importance, but who in reality take no part in its life. Now this occurs more in unions of agricultural labourers than among artisans, because in the country the syndicalists are more scattered, and therefore better able to evade the syndicalist discipline. Besides, as a rule, their wages in money are not high and their habits are more economical than those of dwellers in cities. Rural syndicates, it is true, content themselves with small subscriptions, often only 10 centimes per month, yet in many cases it is very difficult to collect even this, and consequently the number of nominal members is very large. M. Souchon believes that taking into account the continued extension of syndicates of factory workers we may conclude that there are between the two forms of labour great differences which throw difficulties in the way of the extension of syndicalism among rural workers.

ITALY.

MISCELLANEOUS NEWS.

1. — THE ORGANISATION OF THE AGRICULTURAL CONSORTIUM OF GENOA FOR THE SALE OF MILK. — One of the most serious and widely debated questions of the day is that of the milk supply for great urban centres. (1)

In the general rise in the cost of living the high price of milk is felt in a special manner (2) as it is an indispensable article of diet more especially for babies, and the sick and aged. The high price now charged for milk is not only due to the scantiness of the supply as compared with the increased demand, but also to the defective organisation of its collection and sale. It is therefore of interest to study the effort made by an agricultural co-operative society, the *Consorzio agrario* of Genoa, one of the most prosperous and active in Italy, to solve the problem. (3)

The Co-operative Agricultural Consortium of Genoa, established in 1900 with 14 members and a capital of 490 lire, had the purpose common to all such associations of promoting the improvement and prosperity of agriculture and of the agricultural classes in general.

At the start, owing to the inertia and lack of confidence of many and to lack of capital and of assistance, the difficulties encountered were many and serious and the action of the Consortium was necessarily restricted. But little by little the difficulties were overcome and the association gained the confidence of the farmers. The membership rapidly increased,

(1) Most meritorious work has been done in this matter by the *Unione Nazionale delle Latterie Sociali* (the National Union of Co-operative Dairies) which has placed itself at the service of several public administrations for the supply of milk in important urban centres. A start was made in Rome, to which the great co-operative dairy of Soresina (Cremona) daily supplies 10,000 litres. The Union is now negotiating with the municipalities of Cremona, Milan, Pisa, Reggio Emilia, Taranto, etc., with a view to supplying them with the milk needed for local consumption.

(2) See on this subject an article by Maggiorino Ferraris in the *Nuova Antologia* of October 16th, 1915: "The price of milk and the control of the high cost of living in Rome" (*Il prezzo del latte e la lotta contro il caro viveri a Roma*).

(3) The data on this subject are gathered from an article by Gabriele Galliani, president of the *Consorzio agrario* of Genoa, published in the *Nuova Antologia* of October 16th, 1915: "The Milk Problem and the *Consorzio agrario* of Genoa" (*La questione del latte ed il Consorzio agrario di Genova*).

attaining in the course of a few years the number of 500 (it now stands at 900), business grew, and before long the management was in a position to experiment the more important portion of its programme, namely, the sale of members' produce, beginning with milk. The Consortium started on this business at a time when the need of organising the milk trade in accordance with the requirements of hygiene and domestic economy was most urgently felt.

An accurate enquiry had shown that Genoa consumed daily upward of 40 thousand litres of milk (now increased to nearly 70,000) and that out of each hundred litres brought into the town nearly 87 were of skimmed or separated milk. This milk sold at an average price of 35 centesimi per litre.

As a result of this enquiry the Agricultural Consortium resolved to start the sale of fresh, unskimmed milk, and after making the requisite studies and negotiations it began to do so in 1905, beginning with a contract for supplying those institutions which are most in need of genuine, sound milk the civil hospitals. As the result of patient organisation and propaganda, in which it was powerfully assisted by the Itinerant Lectureship of Agriculture, the Consortium succeeded in inducing its members to devote themselves to dairy farming and to supply all their milk to the Consortium at the price and on the conditions it prescribed.

Where small farms prevailed the formation of co-operative societies for production was promoted and they were provided with adequate means for collecting and forwarding the milk on the most approved sanitary methods; in this way the Co-operative Society of San Salvatore was formed with a membership of thirty small farmers and in 1906 it began to supply the Consortium with upwards of 550 litres of milk a day. The supply constantly increased, so much so that some members of the Consortium, owner of model dairies stocked with cows of first rate breeds, decided to form the Dairymen's Union of Tortona (*Unione-produttori di latte di Tortona*) which offered all the requisite guarantees and obtained a contract with the Consortium which has since been renewed every three years. This contract contains explicit clauses which insure the supply of genuine, sound, fresh milk to the Consortium. The Union undertook to filter the milk when fresh from the cow, and to chill it before forwarding it in special cans supplied by the Consortium. These cans are adapted to long journeys and insure the milk against deterioration. The Consortium also reserved itself the right to have the dairies inspected by a veterinarian of its choice, to take samples of the milk, etc.

The supply was so perfect that the hospitals renewed their contracts, and gradually other charitable institutions followed their example. Thus the sales, which during the first year did not exceed 1000 litres per day, progressively increased from year to year until they attained their present figure of five thousand litres a day. The Consortium was thus able to effect a considerable saving on the cost of carriage.

Having solved the difficulties connected with collecting and forwarding the milk, those involved in its storage and control were next dealt with.

for this purpose the Consortium, in view of the increased sale and the need facilitating and accelerating the work of distribution, decided to install refrigerating plant on its own premises, and machinery was acquired for its purpose which could chill and keep at a temperature of not more than 10 degrees centigrade as much as 500 litres of milk a day. But this was soon inadequate to cope with the ever increasing demand for the milk, which grew beyond all expectations, and in 1909 a new and larger plant was installed.

At the same time the Consortium, so as to check the quality of the milk supplied and thus offer a satisfactory guarantee to its customers, opened a chemical laboratory supplied with all the apparatus required for the most careful analyses, the management of which was entrusted to an expert chemist.

As soon as the milk reaches the refrigerating room samples are taken from all the different lots; these are analysed and the results of the analysis entered in a special book and at the same time communicated to the manager of the association.

Samples are also taken from time to time at the different depots so as to make sure that the employees do not adulterate the milk consigned to them for sale.

In spite of the considerable expenditure on labour required for the collection of the milk, and for filtering and chilling it, and of the cost of carriage and handling on delivery, and in spite of the unavoidable percentage of loss consequent on these operations, the Consortium has been able to sell milk to the hospitals at 27 lire and later on at 29 lire 50 centesimi the quintal, a price considerably lower than that paid by hospitals in other cities. It must be noted that the milk pays a municipal tax of 4 lire a quintal. The Consortium fixed the retail price at 35 centesimi per litre, a price which the public was accustomed to pay for skimmed milk. The Consortium has opened 18 depots in the most populous districts of the city, which fully satisfy in all respects the requirements of the population (1).

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2. — THE LIGURIAN CONSORTIUM OF CO-OPERATIVE SOCIETIES FOR PRODUCTION AND LABOUR. — The co-operative labour societies are one of the most characteristic forms of Italian co-operation. Organised amongst workmen, more especially day-labourers and workers in the building trades, they were founded for the special purpose of emancipating their members from subjection to ordinary contractors, and for securing contracts

(1) The Agricultural Consortium of Genoa does not only sell ordinary milk, it has also placed on sale for children and invalids humanised milk, most carefully prepared, and yoghurt. It also sells genuine olive oil, pure cream butter, and eggs, securing in the course of a few years a large custom and playing an important part in the provisioning of the city.

for public works direct from the government or from provincial and municipal administrations. Most of these associations undertake to build and keep in repair roads, bridges and canals, to carry out drainage and irrigation works, land reclamation, levelling and preparing lands, etc. In the *Bulletin* for November 1914 we published an article showing the importance of such associations and the measures taken in Italy to promote their growth, and we pointed out the important part they were taking in carrying out government contracts (1).

It was then shown that the Law of June 25th., 1909, No 422, authorises such associations to unite in consortiums in order to apply for contracts of more importance, each of which may amount to as much as two million lire. One of the most prosperous of such consortiums is the Ligurian Consortium of Co-operative Associations for Production and Labour, on which we give the following data, drawn from the "*Cooperazione Italiana*" of October 15th., 1915 (No. 1161).

This periodical states that if the co-operative movement in Liguria has attained such proportions as to rival the most important industrial and commercial undertakings, the credit is mainly due to the Chamber of Labour (*Camera del Lavoro*) of Genoa. It was this institution which in 1907 gathered into one body the several co-operative labour associations, organising them into a federation which subsequently gave rise to the Consortium. To its initiative is also due the foundation of a distributive consortium, which has already opened several stores in the city and which is of great service in protecting the interests of consumers.

The Ligurian Consortium of Co-operative Associations for Production and Labour was incorporated by a decree of February 11th., 1912 (2). Seven associations joined to form it, and it now numbers as many as 17 of the most important co-operative organisations of the city and province, carrying on the most various industries, from those of the building trades to those of ship-building and ship-breaking, from loading and unloading coal and merchandise to the manufacture of compressed air tanks and boilers, from wood and marble work to the printing trades, etc.

To-day the Consortium and its affiliated co-operative associations represent a labour force of over eight million lire, a subscribed and paid up

(1) Over 600 co-operative associations for production and labour are now entered on the registers of the prefectures. During the three year period, from 1910 to 1912, 176 of these secured from the administration of public works 543 contracts for a total value of 30,291,401 lire. These co-operative associations secured during this period from 2.11 % of all contracts assigned in the Marches up to 58.34 % of those assigned in Emilia. See on this subject the interesting Statistical Report on Contracts for Public Works (*Relazione statistica sui contratti d'appalto*) Vol. 1, 1910-1912, published by the Ministry of Public Works in 1914.

(2) The Consortiums of co-operative associations for production and labour, of which there are now more than twenty, are established by royal decree on the motion of the Ministry of Agriculture, Industry and Commerce, acting in concert with the Ministry of Public Works; they enjoy full autonomy but are subject to the supervision of the said ministries; they are corporations and come under the provisions of the commercial code as regards their commercial dealings and all the effects consequent thereon.

capital of over half a million lire, a reserve fund of about 300,000 lire, and a benefit fund of over 90,000 lire.

The work of the Consortium is mostly concerned with the building trades, works of excavation, ship-breaking, and so forth. The Federation which preceded the present Consortium had already contracted for and carried out important works of this kind to the entire satisfaction of the administrations which gave the contracts (1).

Thanks to the facilities granted by law the Consortium has been able to develop rapidly, as is shown by the following table giving data for the first three years' work:

Growth of the Ligurian Consortium of Co-operative Associations.

Year	Capital	Reserve Fund	Value of work contracted for	Net profits
	Lire	Lire	Lire	Lire
1912	20,980.00	—	2,063,379	133,667.50
1913	68,799.29	26,733.50	2,300,965	152,341.80
1914	81,576.68	66,173.74	2,522,239	138,045.81

If it should seem that the capital owned by the Consortium is disproportionate to the value of the work contracted for, it should be remembered that the figures given are for the capital contributed by the affiliated co-operative societies in conformity with an explicit provision of the law. But as the statutes of the Consortium contain an article which provides for "the unlimited and joint liability of all the co-operative associations affiliated to the consortium" it may truly be said that the capital of the Consortium amounts to over half a million lire, which is the value of the capital of the several associations forming the Consortium.

The Consortium has played an important part in the rebuilding of Genoa: the great blocks of workmen's dwellings, the laying out of the streets and squares in important sections, the enlargement of school buildings, etc., are all works which it has carried out. But the most important work on which the Consortium is engaged is the erection of the new hospital of S. Martino d'Albaro, which entails an expenditure of over 5 million lire.

The mode in which the Consortium distributes its profits is worthy of note. In so doing it does not only concern itself with the increase of

(1) The statistical report on contracts for public works, already referred to, points out that during the three years from 1910 to 1912 four co-operative consortiums secured 14 contracts from the administration of public works for a value of 5,337,616 lire. Ten of these contracts were given to the Federation of the co-operative associations of the province of Ravenna for 366,316 lire.

its capital and reserve fund and with the satisfaction of the material need of the affiliated co-operative societies proportionately to the labour force which each has contributed to the common work, but it also takes into account the spiritual and moral requirements of the working classes, granting subsidies to the People's University, to the G. Mazzini Library, to the Consortium of Friendly Societies, and to other institutions which aim at the moral improvement of the workers.

Many of the affiliated co-operative associations are acquiring importance both on account of their increasing wealth and of the money value of the contracts which they carry out. Thus the co-operative association for unloading coal, which has a paid up capital of upwards of 60,000 lire, as well as a considerable reserve and benefit fund, carried out in 1914 work for the value of over two million lire at a net profit of 102,983 lire, and the metal workers' co-operative association, which owns a capital of 120 thousand lire, carried out work valued at over one million lire, etc.

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3. — THE NEW BYE-LAWS OF THE ECONOMIC AND SOCIAL UNION OF ITALIAN CATHOLICS. — As our readers already know, the Economic and Social Union of Italian Catholics with head-quarters at Bergamo, is the great centre which co-ordinates and directs the activities of the economic and social institutions of Catholics in Italy. Its bye-laws have recently been radically amended so as to fit it to meet the requirements of the day and the ever growing development of Catholic activities. As a result of this reform the organisation of the Union is fixed as follows: in the first place, its aim is to "promote, direct, and co-ordinate all the social and economic activities of Italian Catholics in conformity with Catholic doctrine with the instructions of the Holy See, with the principles laid down in its programme, and with the decisions of the Board of Management of the *Azione cattolica Italiana*. The Union consists of all the social and economic institutions, which are already organised into their special national federations, and aims at attaining its objects mainly by verbal propaganda, by publications, visits, and the inspection of the affiliated institutions, courses for technical training, meetings and congresses.

Its organs are the "General Council" and the "Presidential Board." The General Council consists of (a) the President and one representative for each of the above mentioned national federations; (b) the general secretaries of those national federations which have organised a special secretarial office in regular working order; (c) additional councillors whom the Council may appoint in number which may not exceed one half of the number of the *ex-officio* councillors. The members of the General Council remain in office for three years and may be re-elected. The Council meets as a rule once a year, and after hearing a report on the moral and economic progress of the work, lays down in outline the programme for the

future, appoints, as the case may be, all or part of the elective members of the Council, and proceeds to the election of the members of the Presidential Board. It also fixes the annual dues to be paid by the several national federations to the funds of the Union. Each member of the Council has the right to submit motions for discussion at this meeting.

The Presidential Board consists of a President, a Vice-President, a treasurer, and two councillors, also of an Ecclesiastical Assistant appointed directly by the Holy See with a deliberative vote, and of the Secretary General of the Union with an advisory vote. This board represents the Union, is entrusted with carrying out the decisions of the General Council, watches over the procedure of the affiliated Federations, calls the general meetings, draws up the agenda for them, and compiles the statistical returns of the social and economic associations.

(Abstracted from the *Azione Sociale*, Bulletin of the Economic and Social Union of Italian Catholics, Bergamo, August, 1915).

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4. — AN IMPORTANT INITIATIVE OF THE ITALIAN FEDERATION OF CATHOLIC RURAL BANKS. — The Italian Federation of Catholic Rural Banks has recently drawn up a comprehensive scheme for the reorganisation of the local federations of rural banks for which it has been preparing for some time past. This scheme consists mainly in uniting all the existing rural and peoples' banks in legally constituted diocesan federations for each province or region. Several such federations already exist, some of which are prosperous. We note, amongst others, the Federation of Rural and Peoples' Banks of the Province of Bologna, which on the 31st. December, 1914, grouped together 84 banks with 7429 members; the Central Credit Bank of Latium, with 38 federated banks; the provincial or diocesan federations of Cosenza, Brescia, Bergamo, Pistoia, Treviso, Mantua, etc. Most of these, however, are not legally recognised, and so cannot exercise economic functions but are limited to exercising moral influence. In accordance with the above mentioned programme, there will henceforth be two kinds of legally constituted local federations; one kind will limit its work to inspection and technical advice, the other will discharge the functions of central banks. The latter will be organised only in those localities in which the financial duties of a central bank are not already discharged by a local Catholic bank. The National Federation has therefore compiled a set of model bye-laws to serve as a basis on which to draw up the bye-laws of the new federations, and by which to amend those of federations already in existence. It is especially suited to the needs of those federations which do not intend to act as central banks. In accordance with these bye-laws the said federations will be organised as co-operative societies with limited liability, the purpose of which will be (a) to act as the central organ of the affiliated share-holding societies and to act as an intermediary for facili-

tating the financial transactions of said societies with the Banks of issue and with ordinary credit banks ; (b) to organise on behalf of the affiliated share-holding societies services of representation, supervision, and advice on questions of administration, law, and accountancy, more especially by means of visits of inspection ; (c) to promote the organisation of new institutions of popular credit and co-operation ; (d) to assist the affiliated share-holding societies in making their collective purchases and in all technical, fiscal, legal and economic matters, (e) to develop by means of the affiliated share-holding societies the agricultural credit business.

The means at the disposal of these federations will consist of a share capital formed by shares of 25 lire each and of a reserve fund. Membership is open to rural banks, peoples' banks, and workmen's banks, to co-operative and other legally constituted societies, and, in special cases, to individuals who have actively promoted co-operation and mutuality. Banks, co-operative societies, and other bodies which wish to become members must make application in writing to the Board of Administration must accept the bye-laws and rules of the federation, and must be admitted by the Council itself, which decides without appeal. On becoming share-holders the affiliated societies must (a) submit to inspection, and conform to the decisions taken with regard to them by the Board of Administration, and assist in assuring the regular working of all the other services of the Federation ; (b) pay each year dues fixed by the general meeting as compensation for the cost of the services above referred to ; (c) conform with the decisions of the general meeting and the Board of Administration. This board consists of seven members, and has the fullest powers for the ordinary and special administration of the federation ; it deliberates and provides for the work and services of the federation, for the admission, withdrawal, and exclusion of members, for the appointment and salaries of employees, and so forth.

The better to carry out this comprehensive scheme, the National Federation is now inspecting the federations affiliated to it so as to make sure of their regular working and to facilitate their development. The federations of Bologna, Lodi, Florence, Forlì, and others have already been visited and answers obtained to a special "questionnaire", consisting of two parts, one dealing with the generalities of the federated organisation such as title, number, situation and nature of the affiliated banks, bye-laws, working organisation of the several federated services, rules of administration, financial means, etc, the other dealing with financial questions as for instance, loans, current accounts due to the society, securities, cash in hand, goods, capital and reserve fund, deposits, etc.

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5. — THE FOUNDATION OF AN AGRICULTURAL LOAN BANK. — On the initiative of the Cooperative Agricultural Union of Latium an Agricultural Loan Bank has recently been opened in Rome with the following programme

(a) to secure credit on the most favourable conditions to its members and to agriculturists in general, freeing them from the need of selling their produce under unfavourable conditions just after the harvest and enabling them to hold their crops for sale at the most favourable moment by means of credit warrants accompanied by pledge certificates granted to members on depositing their produce in the general warehouses in Rome; (b) to organise the retail sale of agricultural produce to the consumer direct, so as to enable purchasers to buy their provisions at moderate prices without having to satisfy the undue exactions of speculating middlemen; (c) to give commercial value to grain and seeds by sorting, sifting, and cleaning them with proper machinery, so as to enable the farmer to profit by the increased value conferred on such products by this process.

(From a notice sent out by the Society in November 1915).

Part II: Insurance and Thrift

GENERAL.

TECHNICAL CONDITIONS OF FORESTRY INSURANCE

(Continued).

§ I. HOW TO FIX THE RATE OF CAPITALISATION FOR FORESTS.

The labours of the Superior Commission appointed by the French Government to ascertain and estimate the amount of the material losses caused by the war have induced M. Dabat, General Manager of Waters and Forests, to consider thoroughly the problem of the valuation of damage to forests treated by us in the number of this Bulletin for October. The eminent specialist classifies this damage under three heads:

- I. Damage to forests that have been felled ;
- II. Damage to standing trees ;
- III. Damage to the soil.

It is only the two latter categories that come within the range of our investigations.

M. Dabat first of all points out that in the case of forests it is as a rule impossible at once to restore them to their former condition, for the wood destroyed is only slowly formed again. Therefore, during the period of restoration, the decrease in the yield from the forest must be compensated by an amount in money. The amount of money to be paid at once to the injured proprietor, as compensation, can evidently only be fixed by means of calculations implying the adoption of a rate of interest.

Forest produce takes many years for its formation. The value of a plantation a year old cannot be realised, nor that of one five or even ten years old. However, such plantations have a value for their proprietors, account

of which must be taken if they are damaged or destroyed. This value they possess solely in view of a later realisation, and it is called the future value of the trees or plantations. It can only be fixed by means of calculations implying the adoption of a rate of interest.

It is evident that the rate to be adopted must always be that of the investment of the capital sunk in the forest under consideration, or, if it is preferred, the rate at which the capital produces. In fact, if for ten years we deprive a forest proprietor of an annual revenue of 100 francs from his property, we can only fairly compensate him by means of an amount capable of yielding these ten annual sums of 100 francs or the same rate as that at which the forest produces. If the forest produces at the rate of 3 %, the estimate of the damage will be most certainly and quite fairly very much higher than in the case of a loss of the same yield incurred in a forest yielding at the rate of 5 %. This, in the end, means that we must pay the injured proprietor not merely interest, but also an amount of capital equal to that he possessed before.

The estimate depends very largely on the rate adopted. Thus the question of the selection of the rate is of fundamental importance and has been deservedly considered separately and in detail by M. Dabat.

In every forest we find a working capital and a yield. The capital includes the soil, the standing wood and the circulating capital indispensable for every undertaking. Comparison of the annual yield with the invested capital will give an amount called the rate of yield from investment in forest estate, which is only the yearly interest on capital. It has become usual to express the rate as percentage of the capital and to say it is 3 %, 5 %, etc. While it is of extreme importance to fix the rate to be adopted, or the rate at which the capital invested in forests produces, it is also very difficult and sometimes impossible to fix it accurately; it is often necessary to be satisfied with an estimate, and this constitutes the chief difficulty in forest valuation and is peculiar to it.

In fact, the rate can only be calculated in the case of forests normally worked, that is to say of forests giving, ordinarily, a constant and regular annual yield and thus having a perfectly definite value. This seldom occurs in practice and can only occur in cases of forests of very simple character, as for example ordinary copsewood giving an annual or periodical yield. Really, we are almost always, except in this special case, reduced to estimating the rate. M. Dabat gives the following advice in regard to these estimates.

The rate of yield from investment in a forest estate or the rate of production of a forest, varies within very wide limits, for example, between 1 % or even less and 5 % or 6 % or sometimes more.

If a forest only produces quite young wood and faggots the commercial value of which hardly covers the expenses of gathering them, it is evident that the rate of production is very low, for the principal always includes at least the value of the forest soil and a circulating capital, even if the value of the standing wood is very small.

On the other hand, if the forest is worked so as to produce very old wood, the capital value will become, very considerable, if an annual yield is taken from it, on account of the enormous value of the growing standing wood. Experience shows that this capital value soon increases (when the age for felling is raised) far faster than the yield. If the forest gives a periodical yield, the long intervals between the fellings produce the same results, so that we may say:

"In systematically worked forests very low rates of yield correspond with very early fellings. When the age for felling is raised, the rate rises and soon arrives at a maximum, after which it goes on indefinitely decreasing, so that with very late fellings there correspond very low rates of yield."

On the other hand, the certainty with which the different kinds of forest produce varies greatly. Some, such as pine forests, are very much exposed to loss through fire, which reduces the value of their capital and increases the rate of yield. Others, such as forests, of deciduous trees, give a very constant yield, because it is obtained from a large variety of produce, whilst the principal is very little liable to be affected by accidents. The rate of yield from investment in such forests would be very low. Woods of the character of oak coppices, the yield from which consists in a single class or only two classes of goods, will give a very uncertain and varying yield.

Finally, the rates of yield from investment in forests of course vary according to the general law of supply and demand which effects all values of every kind according to time and place. When the economic circumstances are of a nature to lower the rates of yield from investment generally or to increase them, the rates in connection with investments in forest estate of necessity are affected. A great difficulty in regard to the adoption of rates of interest in connection with forestry is that the calculations often suppose an invariable rate for a very long period, which does not correspond with the facts. Experience shows that the rates, whatever they may be, vary according to economic conditions and consequently from one period to another, as above said.

We may conclude then that if the selection of a rate of interest is extremely important for purposes of forest valuation, it is also an extremely delicate matter. It will, however, be useful to give here, with every reservation, a few figures, while we must observe that they are only averages that seem to be true for the present moment, but the different species may present divergences from them of greater or less importance.

Generally, the rate of yield from investment in an ordinary coppice varies from $3\frac{1}{2}\%$ to 6% .

In a coppice containing also large trees it would be from 3% to $4\frac{1}{2}\%$, according as such trees are more or less abundant.

In a pinewood it would be from 4% to 5% , etc. It will be understood, that, in spite of the advantage it would be for appraisers to obtain figures that might serve as a basis for their calculations, it has not been possible for M. Dabat to make precise statements and definite affirmations, as the matter

does not lend itself to this. We have a problem of valuation before us which has to be solved specially for each forest.

Finally, when the elements necessary for fixing the rate according to the above rules are not forthcoming, an indication may be found in the commercial rate of yield from land investments in the region.

§ 2. THE TWO VALUES OF STANDING TIMBER.

The rate of capitalisation serves, we have said, to fix the future value. A living tree or plantation has in fact two values. It may be cut and delivered to the wood merchant. He will pay the sale value. It may also be left standing with a view to later realisation by a speculator purchasing it at the value which it will have at the time of realisation less discount. He will estimate it at its future value. Sale value and future value are two independent conceptions, neither of which can be substituted for the other. No valuation can leave either out of consideration without the risk of very serious error.

The future value always exists. However old a living tree may be, in can always be left to grow older. However young it is, even if only a seedling still possessing its cotyledons, it has already a future value.

Only those already sufficiently mature for cutting them to give a profit have a sale value. A four years old copsewood has a future value; it has as yet no sale value.

Most frequently the two values coexist, in the case of a living tree or wood. The higher of the two is then taken as the real value. The two values are, indeed, equally real, but it is true that the highest is the most important; it is the price that will be realised at sale when there is sufficient competition.

Experience shows that when a tree or a wood is allowed to grow old the capital represented by its value together with that of the soil in which it grows increases at a rate which becomes less and less every year from the first appearance of the plants up to the most advanced age. In other terms, the rate at which the capital invested increases, that is, the proportion between the annual increase in value and the amount of value acquired, continually decreases as time goes on. Very high in the earliest years, it at last falls to insignificant amounts like 0.50 %, 0.25 % or even less, when the woods are very old.

It follows that when we fix the future value of a living wood or tree by discounting the value it will have in a certain number of years at a rate calculated as above explained, we shall get a value higher than the sale value if the tree or wood is young and the rates of increase are, therefore, high. If, on the contrary, the forests are too old and their value only increases very slowly, on discounting the ultimate value at the same rate, we shall of course arrive at a future value less than the present sale value. Between these two cases we find that in which the two values are the same.

We shall not dwell on these considerations which will be found developed in special treatises. It is only necessary to mention that, if we compare the future value with the sale value, we find that, for very young woods, the first is the higher, that a time follows when the two values are the same and, afterwards, in the case of older woods, the sale value is the higher.

§ 3. METHODS OF VALUING STANDING TIMBER.

We have seen in the first part of this article the nature of the damage due to forest fires. When the damage has been done, the appraiser must form an accurate idea of the nature of such woods as have been totally destroyed, their extent and the volume of standing timber. When the woods have merely been injured it is possible to calculate the value of what remains, which is called salvage. Inventories made for the purpose may require much time and expense and in any case must be in part estimated.

Except for the very special case of a forest normally worked, the damage to standing trees is obtained by estimating the forests damaged or destroyed at the value they had for their proprietor, less the salvage, if any.

If the woods damaged or destroyed were sufficiently old to be considered as ready to be felled for the markets, they are valued at their market price or sale value. Otherwise they will be estimated at their future value, that is to say taking into consideration the value they would have had at the moment they became ready for felling and treating the forest as a capital bearing compound interest.

It is shown in the special treatises that if x is the future value of a wood, n' years old, which must be realised when it is n years old and will then give a net revenue equal to r and if t is the rate to be adopted in the calculations, we obtain the equation:

$$x = r \frac{(1+t)^{n'} - 1}{(1+t)^n - 1}$$

The factors $(1+t)^{n'}$ and $\frac{1}{(1+t)^n - 1}$ have been calculated in ad-

vance for all usual values of t , n' and n and are given in tables in all treatises on forest valuations or in the "ready reckoners" of business men. It is enough to discover the value of these factors and apply the formula in order to obtain the result.

Example. — A wood, 18 years old, will be felled at 25 years, when it

will give a net yield of 600 francs. The rate to be adopted to 4 %. What is the real future value of this wood ?

It is

$$x = 600 \frac{1.04^{18} - 1}{1.04^{25} - 1}$$

The table shows that $1.04^{18} = 2.026$, whence $1.04^{18} - 1 = 1.026$ and

$$\frac{1}{1.04^{25} - 1} = 0.60$$

We shall then have $x = 600 \text{ francs} \times 1.026 \times 0.60 = 369 \text{ fr. } 36$.

We may still further simplify the calculations by means of tables to give directly for the usual value of n , n' and t the factor by which the revenue r must be multiplied to obtain x , the future value. Such a table will be found at the end of this article.

The rate to be adopted in the calculations must be that of the yield from the investment of capital sunk in the forest under consideration.

It is necessary to state clearly when the woods must be estimated at their future value and when at their sale value.

Cases in which the age for felling is indicated.—When in a forest an age for felling has been decided on by the proprietor, all woods that have not yet reached this age must be estimated at their future value. If a proprietor, whose forest yields at the rate of 4 %, proposes to fell at 25 years a wood nineteen years old, which will sell for 600 frs. net at 25 years, this wood has very really, *for its owner*, the future value calculated. This value lawyers call *erga dominum*; and the experts must have this in view when they make their estimates.

Woods that have passed the age fixed for felling, if any such are found in the forest area, must be estimated at their sale value, for they represent for their owner a revenue that has become due and is realisable.

Case in which the age for felling is not indicated.—Whenever the age for felling is not strictly fixed by the proprietor himself, the appraiser must assign to the growing woods the highest value they can have at any age at which they are felled. That is to say a value for n is sought for that will give

the highest value to the expression $r \frac{(1+t)^{n'} - 1}{(1+t)^n - 1}$ in which n is the only

independent variable quantity, since, when n is known, the value of r is immediately found. Once the age n is fixed (the forestry economists often call it the limit of commercial exploitability), woods that have not yet attained n years of age must be valued at their future value, and older woods at their sale value.

But these operations may appear somewhat complicated.

M. Dabat has given the following rules to simplify the method :

In the case of copsewoods not yet 30 or 35 years old, the future value will be calculated on the supposition that they will be felled when from thirty to thirty-five years old, except in the case of certain kinds of trees, such as chestnuts, for example, which are felled with advantage at a much less advanced age. In the same way, the future value of high forest trees not more than fifty or sixty years old will be calculated on the supposition that they will be felled when from fifty to sixty years old.

In the case of copsewood more than from thirty to thirty-five years old, or high forest trees more than fifty or sixty years old, the sale value will be fixed.

When we have to consider young fresh growth among high forest trees felled at long intervals, these young trees may be valued at their future value as if they were to be felled when from fifty to sixty years old.

When the value of these fresh growths is insignificant in comparison with that of the older trees, sometimes a simple estimate of their value will be held sufficient, provided it is based on the future value.

This kind of valuation will be, for example, necessary in forests where trees of all ages grow together indiscriminately, when it will be impossible to fix the value of the young trees otherwise than by such an estimate.

Valuation of trees. — The value of trees is arrived at precisely in the same way as that of the woods. When the age for felling is fixed, the future value of trees that have not reached this age may be calculated, the others, if there are any, will be valued at their sale value.

When no age for felling has been fixed, or when the age fixed is one very advanced, most usually, in practice, their sale value is estimated, if the wood has attained a certain age, for example from 50 to 60 years, and younger trees will be estimated at their future value on the supposition of their being felled at an age of from 50 to 60 years (taken by way of example).

Some experts make no calculation in fixing this future value and simply add a surplus value, which they estimate, to the sale value of the young trees. Thus a standard which will be furnish a tenth of a *stère* of firewood and thus will have a sale value of 40 c., will be estimated at 60 c. or 70 c. or more according to its age, so as to take account of what it might become, at the end of a certain number of years, as wheelwrights' wood.

Case of Forests systematically worked. — For forests systematically worked a special system of valuation may be adopted.

Those forests are said to be systematically worked the management of which is regulated and the capital constituted in such a way as to give a constant and regular yield, as a rule an annual yield.

This organized condition may be theoretically defined for every type of forest management. In fact it can scarcely be realised in practice except when the intervals between the felling are very short, as in the case of simple copses or certain pinewoods intended for felling at short intervals, which may, in an economic sense, be assimilated to copses.

When we find forests in which felling takes place at short intervals and the capital is perfectly normal and the yield regular, we may, according to M. Dabat, estimate, according to the following method, the loss suffered by the proprietor whose standing woods have been partially destroyed.

After a detailed examination of the condition of the forest, a working plan must be prepared so that the forest may be as speedily as possible brought back to its former condition of systematic working. This result can only be attained at a more or less distant date, during which the revenue will remain less than it was previously, as the capital lost can only be reconstituted by means of economy in production. In order that it may be taken into account, during the period of reconstitution, the decrease in the forest yield must be made up for each year by means of a sum of money. Let r , for example, be the former annual revenue, $r_1, r_2, r_3 \dots r_p$ the revenue obtained in the first, second third ... p^{th} year of the period of reconstitution. The loss to be incurred in the first year will be $r - r_1$, that of the second year will be $r - r_2$, that of the third year $r - r_3$, that of the p^{th} year $r - r_p$. The first will be made up for by the present

payment of an amount equal to $\frac{r - r_1}{1 + i}$ which in one year will become $r - r_1$

the second by an amount $\frac{r - r_2}{(1 + i)^2}$, the p^{th} by an amount $\frac{r - r_p}{(1 + i)^p}$, which in

p years will become $r - r_p$, etc. The total loss will be the sum of all these factors.

§ 4. DAMAGE TO THE SOIL.

The losses caused by disturbance of the soil, the destruction of the roots of copses or of high forest trees must be estimated from the amount to be spent for the restoration of the former condition of the soil. When in practice this former condition can only be partially restored, a compensating estimate must be established.

If the leaf-litter (the surface cover formed by dead leaves and forest debris, constituting the raw material of the vegetable mould and the principal element of the fertility of the forest soil) is destroyed, it will have to be considered that this destruction occasions a temporary decrease of the fertility of the soil, that is to say of the production during one, two or three years, for example.

26	0.840	0.811	0.850	0.900	0.970	0.970	0.969
27	0.884	0.846	0.847	0.840	0.877	0.877	0.879
28	0.907	0.903	0.896	0.894	0.885	0.885	0.879
29	0.933	0.931	0.947	0.943	0.941	0.941	0.938
30	1.000	1.000	1.000	1.000	1.000	1.000	1.000
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Table showing the values of the coefficient $\frac{(1+t)^n}{(1+t)^n - 1}$ by which the yield τ from a forest felled at the age of n must be multiplied in order to obtain the value of the standing timber at a lower age n' .

AGE OF FELLING.

Age of the wood <i>n</i> ¹	35 years										40 years										45 years										
	rate per cent										rate per cent										rate per cent										
	2.5	3.0	3.5	4.0	4.5	5.0	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
1 year	0.016	0.014	0.012	0.010	0.008	0.006	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2 years	0.037	0.034	0.030	0.026	0.022	0.018	0.014	0.011	0.008	0.006	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3 years	0.056	0.051	0.046	0.041	0.036	0.031	0.026	0.021	0.016	0.012	0.008	0.006	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4 years	0.076	0.069	0.063	0.056	0.050	0.043	0.037	0.031	0.024	0.018	0.013	0.009	0.006	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 years	0.095	0.087	0.080	0.074	0.067	0.061	0.054	0.047	0.040	0.033	0.026	0.020	0.014	0.009	0.006	0.004	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6 years	0.116	0.107	0.098	0.090	0.082	0.075	0.067	0.060	0.052	0.044	0.037	0.030	0.023	0.016	0.010	0.007	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7 years	0.138	0.127	0.116	0.107	0.099	0.090	0.082	0.074	0.066	0.058	0.050	0.042	0.034	0.026	0.018	0.012	0.008	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8 years	0.159	0.147	0.136	0.125	0.115	0.105	0.095	0.085	0.075	0.065	0.055	0.045	0.035	0.025	0.017	0.011	0.007	0.004	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9 years	0.181	0.168	0.155	0.143	0.133	0.122	0.112	0.101	0.090	0.080	0.070	0.060	0.050	0.040	0.030	0.021	0.014	0.009	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10 years	0.204	0.190	0.176	0.163	0.151	0.139	0.127	0.115	0.103	0.091	0.080	0.069	0.058	0.047	0.036	0.025	0.016	0.010	0.006	0.004	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11 years	0.227	0.212	0.197	0.183	0.170	0.157	0.144	0.131	0.118	0.105	0.092	0.080	0.068	0.056	0.044	0.032	0.021	0.013	0.008	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12 years	0.250	0.234	0.218	0.203	0.189	0.174	0.160	0.145	0.130	0.116	0.102	0.088	0.074	0.060	0.047	0.034	0.022	0.014	0.009	0.006	0.004	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13 years	0.271	0.254	0.237	0.221	0.205	0.189	0.173	0.156	0.140	0.124	0.108	0.092	0.076	0.061	0.046	0.032	0.020	0.012	0.007	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14 years	0.291	0.273	0.255	0.238	0.221	0.204	0.187	0.170	0.152	0.135	0.118	0.101	0.084	0.068	0.052	0.037	0.023	0.014	0.009	0.006	0.004	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15 years	0.310	0.291	0.272	0.254	0.236	0.218	0.200	0.182	0.164	0.145	0.127	0.109	0.091	0.073	0.056	0.040	0.025	0.015	0.010	0.007	0.005	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000

[illegible]

26	*	*	*	0.145	0.186	0.237	0.288	0.339	0.390	0.441	0.492	0.543	0.594	0.645	0.696	0.747	0.798	0.849	0.900	0.951	1.002	1.053	1.104	1.155	1.206	1.257	1.308	1.359	1.410	1.461	1.512	1.563	1.614	1.665	1.716	1.767	1.818	1.869	1.920	1.971	2.022	2.073	2.124	2.175	2.226	2.277	2.328	2.379	2.430	2.481	2.532	2.583	2.634	2.685	2.736	2.787	2.838	2.889	2.940	2.991	3.042	3.093	3.144	3.195	3.246	3.297	3.348	3.399	3.450	3.501	3.552	3.603	3.654	3.705	3.756	3.807	3.858	3.909	3.960	4.011	4.062	4.113	4.164	4.215	4.266	4.317	4.368	4.419	4.470	4.521	4.572	4.623	4.674	4.725	4.776	4.827	4.878	4.929	4.980	5.031	5.082	5.133	5.184	5.235	5.286	5.337	5.388	5.439	5.490	5.541	5.592	5.643	5.694	5.745	5.796	5.847	5.898	5.949	6.000	6.051	6.102	6.153	6.204	6.255	6.306	6.357	6.408	6.459	6.510	6.561	6.612	6.663	6.714	6.765	6.816	6.867	6.918	6.969	7.020	7.071	7.122	7.173	7.224	7.275	7.326	7.377	7.428	7.479	7.530	7.581	7.632	7.683	7.734	7.785	7.836	7.887	7.938	7.989	8.040	8.091	8.142	8.193	8.244	8.295	8.346	8.397	8.448	8.499	8.550	8.601	8.652	8.703	8.754	8.805	8.856	8.907	8.958	9.009	9.060	9.111	9.162	9.213	9.264	9.315	9.366	9.417	9.468	9.519	9.570	9.621	9.672	9.723	9.774	9.825	9.876	9.927	9.978	10.029	10.080	10.131	10.182	10.233	10.284	10.335	10.386	10.437	10.488	10.539	10.590	10.641	10.692	10.743	10.794	10.845	10.896	10.947	11.000	11.051	11.102	11.153	11.204	11.255	11.306	11.357	11.408	11.459	11.510	11.561	11.612	11.663	11.714	11.765	11.816	11.867	11.918	11.969	12.020	12.071	12.122	12.173	12.224	12.275	12.326	12.377	12.428	12.479	12.530	12.581	12.632	12.683	12.734	12.785	12.836	12.887	12.938	12.989	13.040	13.091	13.142	13.193	13.244	13.295	13.346	13.397	13.448	13.499	13.550	13.601	13.652	13.703	13.754	13.805	13.856	13.907	13.958	14.009	14.060	14.111	14.162	14.213	14.264	14.315	14.366	14.417	14.468	14.519	14.570	14.621	14.672	14.723	14.774	14.825	14.876	14.927	14.978	15.029	15.080	15.131	15.182	15.233	15.284	15.335	15.386	15.437	15.488	15.539	15.590	15.641	15.692	15.743	15.794	15.845	15.896	15.947	16.000	16.051	16.102	16.153	16.204	16.255	16.306	16.357	16.408	16.459	16.510	16.561	16.612	16.663	16.714	16.765	16.816	16.867	16.918	16.969	17.020	17.071	17.122	17.173	17.224	17.275	17.326	17.377	17.428	17.479	17.530	17.581	17.632	17.683	17.734	17.785	17.836	17.887	17.938	17.989	18.040	18.091	18.142	18.193	18.244	18.295	18.346	18.397	18.448	18.499	18.550	18.601	18.652	18.703	18.754	18.805	18.856	18.907	18.958	19.009	19.060	19.111	19.162	19.213	19.264	19.315	19.366	19.417	19.468	19.519	19.570	19.621	19.672	19.723	19.774	19.825	19.876	19.927	19.978	20.029	20.080	20.131	20.182	20.233	20.284	20.335	20.386	20.437	20.488	20.539	20.590	20.641	20.692	20.743	20.794	20.845	20.896	20.947	21.000	21.051	21.102	21.153	21.204	21.255	21.306	21.357	21.408	21.459	21.510	21.561	21.612	21.663	21.714	21.765	21.816	21.867	21.918	21.969	22.020	22.071	22.122	22.173	22.224	22.275	22.326	22.377	22.428	22.479	22.530	22.581	22.632	22.683	22.734	22.785	22.836	22.887	22.938	22.989	23.040	23.091	23.142	23.193	23.244	23.295	23.346	23.397	23.448	23.499	23.550	23.601	23.652	23.703	23.754	23.805	23.856	23.907	23.958	24.009	24.060	24.111	24.162	24.213	24.264	24.315	24.366	24.417	24.468	24.519	24.570	24.621	24.672	24.723	24.774	24.825	24.876	24.927	24.978	25.029	25.080	25.131	25.182	25.233	25.284	25.335	25.386	25.437	25.488	25.539	25.590	25.641	25.692	25.743	25.794	25.845	25.896	25.947	26.000	26.051	26.102	26.153	26.204	26.255	26.306	26.357	26.408	26.459	26.510	26.561	26.612	26.663	26.714	26.765	26.816	26.867	26.918	26.969	27.020	27.071	27.122	27.173	27.224	27.275	27.326	27.377	27.428	27.479	27.530	27.581	27.632	27.683	27.734	27.785	27.836	27.887	27.938	27.989	28.040	28.091	28.142	28.193	28.244	28.295	28.346	28.397	28.448	28.499	28.550	28.601	28.652	28.703	28.754	28.805	28.856	28.907	28.958	29.009	29.060	29.111	29.162	29.213	29.264	29.315	29.366	29.417	29.468	29.519	29.570	29.621	29.672	29.723	29.774	29.825	29.876	29.927	29.978	30.029	30.080	30.131	30.182	30.233	30.284	30.335	30.386	30.437	30.488	30.539	30.590	30.641	30.692	30.743	30.794	30.845	30.896	30.947	31.000	31.051	31.102	31.153	31.204	31.255	31.306	31.357	31.408	31.459	31.510	31.561	31.612	31.663	31.714	31.765	31.816	31.867	31.918	31.969	32.020	32.071	32.122	32.173	32.224	32.275	32.326	32.377	32.428	32.479	32.530	32.581	32.632	32.683	32.734	32.785	32.836	32.887	32.938	32.989	33.040	33.091	33.142	33.193	33.244	33.295	33.346	33.397	33.448	33.499	33.550	33.601	33.652	33.703	33.754	33.805	33.856	33.907	33.958	34.009	34.060	34.111	34.162	34.213	34.264	34.315	34.366	34.417	34.468	34.519	34.570	34.621	34.672	34.723	34.774	34.825	34.876	34.927	34.978	35.029	35.080	35.131	35.182	35.233	35.284	35.335	35.386	35.437	35.488	35.539	35.590	35.641	35.692	35.743	35.794	35.845	35.896	35.947	36.000	36.051	36.102	36.153	36.204	36.255	36.306	36.357	36.408	36.459	36.510	36.561	36.612	36.663	36.714	36.765	36.816	36.867	36.918	36.969	37.020	37.071	37.122	37.173	37.224	37.275	37.326	37.377	37.428	37.479	37.530	37.581	37.632	37.683	37.734	37.785	37.836	37.887	37.938	37.989	38.040	38.091	38.142	38.193	38.244	38.295	38.346	38.397	38.448	38.499	38.550	38.601	38.652	38.703	38.754	38.805	38.856	38.907	38.958	39.009	39.060	39.111	39.162	39.213	39.264	39.315	39.366	39.417	39.468	39.519	39.570	39.621	39.672	39.723	39.774	39.825	39.876	39.927	39.978	40.029	40.080	40.131	40.182	40.233	40.284	40.335	40.386	40.437	40.488	40.539	40.590	40.641	40.692	40.743	40.794	40.845	40.896	40.947	41.000	41.051	41.102	41.153	41.204	41.255	41.306	41.357	41.408	41.459	41.510	41.561	41.612	41.663	41.714	41.765	41.816	41.867	41.918	41.969	42.020	42.071	42.122	42.173	42.224	42.275	42.326	42.377	42.428	42.479	42.530	42.581	42.632	42.683	42.734	42.785	42.836	42.887	42.938	42.989	43.040	43.091	43.142	43.193	43.244	43.295	43.346	43.397	43.448	43.499	43.550	43.601	43.652	43.703	43.754	43.805	43.856	43.907	43.958	44.009	44.060	44.111	44.162	44.213	44.264	44.315	44.366	44.417	44.468	44.519	44.570	44.621	44.672	44.723	44.774	44.825	44.876	44.927	44.978	45.029	45.080	45.131	45.182	45.233	45.284	45.335	45.386	45.437	45.488	45.539	45.590	45.641	45.692	45.743	45.794	45.845	45.896	45.947	46.000	46.051	46.102	46.153	46.204	46.255	46.306	46.357	46.408	46.459	46.510	46.561	46.612	46.663	46.714	46.765	46.816	46.867	46.918	46.969	47.020	47.071	47.122	47.173	47.224	47.275	47.326	47.377	47.428	47.479	47.530	47.581	47.632	47.683	47.734	47.785	47.836	47.887	47.938	47.989	48.040	48.091	48.142	48.193	48.244	48.295	48.346	48.397	48.448	48.499	48.550	48.601	48.652	48.703	48.754	48.805	48.856	48.907	48.958	49.009	49.060	49.111	49.162	49.213	49.264	49.315	49.366	49.417	49.468	49.519	49.570	49.621	49.672	49.723	49.774	49.825	49.876	49.927	49.978	50.029	50.080	50.131	50.182	50.233	50.284	50.335	50.386	50.437	50.488	50.539	50.590	50.641	50.692	50.743	50.794	50.845	50.896	50.947	51.000	51.051	51.102	51.153	51.204	51.255	51.306	51.357	51.408	51.459	51.510	51.561	51.612	51.663	51.714	51.765	51.816	51.867	51.918	51.969	52.020	52.071	52.122	52.173	52.224	52.275	52.326	52.377	52.428	52.479	52.530	52.581	52.632	52.683	52.734	52.785	52.836	52.887	52.938	52.989	53.040	53.091	53.142	53.193	53.244	53.295	53.346	53.397	53.448	53.499	53.550	53.601	53.652	53.703	53.754	53.805	53.856	53.907	53.958	54.009	54.060	54.111	54.162	54.213	54.264	54.315	54.366	54.417	54.468	54.519	54.570	54.621	54.672	54.723	54.774	54.825	54.876	54.927	54.978	55.029	55.080	55.131	55.182	55.233	55.284	55.335	55.386	55.437	55.488	55.539	55.590	55.641	55.692	55.743	55.794	55.845	55.896	55.947	56.000	56.051	56.102	56.153	56.204	56.255	56.306	56.357	56.408	56.459	56.510	56.561	56.612	56.663	56.714	56.765	56.816	56.867	56.918	56.969	57.020	57.071	57.122	57.173	57.224	57.275	57.326	57.377	57.428	57.479	57.530	57.581	57.632	57.683	57.734	57
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MISCELLANEOUS INFORMATION RELATING TO INSURANCE AND THRIFT IN VARIOUS COUNTRIES.

ARGENTINE.

THE BEGINNING OF THE SCHOOL MUTUAL MOVEMENT IN ARGENTINE.—

The start of the mutual movement in the Argentine dates from the campaign for social action undertaken in 1912 by M. Leopold Mabillean under the auspices of the *Museo Social Argentino*. This propaganda resulted in the foundation of many institutions based on the principle of mutuality, forming a Pleiades-like group composed of ardent and enthusiastic mutualists. One of the most important effects of this movement was the impetus it gave to mutuality in schools. In fact, at the end of 1913 the "Mutualist Association" was constituted to encourage "saving, mutual protection, and the spirit of union among pupils and ex-pupils in schools." In March of the following year *La Linea Recta*, a school society, acting under one clause of its own constitution and after close study of similar institutions in France, Spain and Belgium, established a mutual association among pupils and ex-pupils of School No. 8 (Council or School District No. 19) to develop which it is making every effort. Owing to the need of having as many schools as possible in the association the rules were amplified, and in the month of May of the present year (1915) a statutory project of mutuality among pupils and ex-pupils of both sexes was submitted for examination to the 19th School District (1). Having been approved with some slight alterations it was transmitted to the National Council of Instruction that it might be put in force in all the schools of the 19th District. Such was the first manifestation of public school mutuality in the Argentine Republic. We shall now enumerate the principal regulations governing the "Mutual Aid Association among Pupils and Ex-Pupils of the 19th District."

The objects of the society in question are: (a) to encourage habits of saving and a spirit of solidarity; (b) to prepare children for their future lives; (c) to help members by a daily allowance in case of illness or

(1) M. Pedro B. Franco, author of the article from which the above particulars are taken, points out the curious coincidence that school mutuality began in Buenos Ayres in the 19th School District as also in the 19th District of Paris.

ident; (d) to grant pensions to members above the age of 55, for old age or infirmity. The society may also constitute for its members under certain specified conditions a dowry or endowment to become payable upon their reaching the age of 25.

The members are divided into four classes: active members, patrons, benefactors and honorary members. The first are present and former pupils of both sexes of the schools of the 19th School District. The patrons are those who by gift or monthly grants contribute to the prosperity of the Institution without receiving advantage from it. The benefactors are those members who distinguish themselves by their activity in the cause of mutuality. Lastly the honorary members are those who have served well of the Institution.

Active members must be above six years of age and under fourteen. Members who entered at the close of the first year of the existence of the society pay an admission fee as follows: from six to eight years the amount of three monthly payments (0.70 pesos); from eight to ten years, the amount of four monthly payments (0.80 pesos); from ten to fourteen years the amount of five payments (1.00 pesos). The sums accruing from this source are paid into the reserve fund.

Patrons, benefactors, and honorary members are admitted and appointed by the Council of Administration of the society, without limit of age, residence or nationality.

The share capital consists of: (1) the subscriptions of active members; (2) those of patrons and honorary members; (3) donations and legacies; (4) sums realised by fêtes, sale of publications, etc., (5) official grants. The total capital is divided into *Ordinary* and *Extraordinary Funds*. The *Ordinary Fund* comprises: (a) the amount devoted to mutual aid, resulting from half the subscriptions of active members; (b) a pension fund formed of the remaining half of these subscriptions; (c) the reserve fund consisting of the admission fees above-mentioned and payments made by patrons. The *Extraordinary Fund* includes donations and legacies, the sums accruing from fêtes and those appropriated to dowries, besides all the money collected without a definite object.

Active members or their legal representatives engage to pay subscriptions as follows: from six to fourteen years, 0.20 pesos per month, half of which goes to the mutual aid fund and half to be entered in the certificate for an individual pension. Members over fourteen years of age pay 0.50 pesos per month, divided in the same way.

Patrons pay an annual subscription of at least 5 pesos. Every patron who pays 50 pesos in one sum will be considered a founder; if he pays 100 pesos he becomes a benefactor.

A year after entrance any active member has in case of illness or accident a right to assistance as follows:

Age of member	Grant per day	
	During the first month of illness or accident	During the two following months
	Pesos	Pesos
from 6 to 14 years	0.25	0.50
" 14 to 25 "	0.75	1.00
" 25 to 55 "	1.00	1.25

If the illness should last more than three months, the Council of Administration must decide whether the state of the funds will permit continuation of the grant.

No member may claim an allowance :

- (1) for any illness that lasts less than four days ;
- (2) for any chronic complaint ;
- (3) for illness caused by intemperance or contracted during an epidemic ;
- (4) for any accident for the occurrence of which the insured person himself must be held responsible ;
- (5) for injuries received in a quarrel if the injured person be the aggressor.

Pensions will be granted :

(a) in case of accident on presentation of certificate of membership in due order and if possible a certificate stating that the accident incapacitates the individual from working, and was not due to his own fault or negligence ;

(b) at the age of 55 years on presentation of a certificate of membership in due order and of a document proving the age of the member.

In case of the death of a member before the age of 22 the society will pay to his legal representative the amount of the premiums already paid towards his retiring pension. Sums unclaimed on the expiration of a year from the death of the member shall be handed over to the mutual aid fund.

Every active member between the ages of 6 and 8 years may form a marriage fund. To do this the member must present a request signed by his or her father or father's legal representative, together with a certificate attesting the petitioner's age, and must pay a weekly supplementary quota of 0.25 pesos.

The number of these payments may be increased at the member's pleasure. The fund may be paid up before the member reaches the age of 25 : (a) in case of marriage, at request ; (b) in case of the death of the member's father, at the request of the widowed mother.

The society in question is ruled and administered by a Council of Administration and a Consulting Council. The National Council of Instruction of the Argentine Republic in the hope of rapidly extending the institution now that the first step has been taken, is preparing a code

of regulations for a "National Union of School Mutual Associations." Of this Union the object will be to encourage the development of the mutual movement in schools, to strengthen the bonds of solidarity among mutual societies, to facilitate the passage of members from one society to another, etc.

(From the *Boletín mensual del Museo Argentino*, Buenos Aires).

DENMARK.

THE NEW DANISH LAW ON SICKNESS INSURANCE SOCIETIES. — The new law first presented to Parliament in 1912 was approved in April, 1915 and comes into force on January 1st, 1916.

It is in conformity with the fundamental principle of the former law : voluntary insurance, with contributions from public institutions (State or Commune).

The right to register with societies recognised by the State is reserved for persons of the working class without means, to whom other classes are assimilated, such as small farmers, clerks, etc. No difference is made in regard to sex.

The person once registered may continue to belong to the society, even when his economic situation is improved, provided that the rules give him this right, but the public institution (State or Commune) will no longer contribute for him and he must himself pay a corresponding contribution.

The society is obliged in case of sickness to provide medical and hospital assistance for the persons registered with it and their children (including adopted children) under fifteen years of age, provided they live in the district of the society.

However, in some cases the society must pay the hospital charges for a person registered with it, when, on account of his work, he has been treated in a hospital in another district.

The daily rate of sick pay is generally at least 40 øre (1) a day. The maximum, which in no case may exceed 3 crs. a day and four-fifths of the average wages of the patient, shall be established in accordance with the total average wages of the persons registered or at a fixed percentage of the average wages of each person registered.

A maternity society is attached to each society recognised by the State : the assistance given is fixed at least 1 crown a day, for the whole period the mother is obliged to keep her bed, and for at least ten days after delivery. The society also provides medical assistance during the confinement.

The new law contains various provisions to prevent the person registered from deriving economic advantage from his illness ; for example, a

(1) An øre is equal to about fr. 0.0135 : 100 øre make a crown.

member, who receives full wages during his illness, has no right to any assistance in money, and, in any case, has only a right to the difference between the wages he received before illness and what he continued to receive when ill.

The state contributions are fixed by the new law at two crowns per person registered, "without means of subsistence," at the end of the year and also the fourth part of the expenses supported by the society for medical and hospital expenses. Besides this, the State pays the fourth part of the assistance in money paid for sickness or medical assistance to women in their confinements, not exceeding, however, a certain amount in the case of each person registered.

The yearly contribution of the State may, in no case, exceed 4.65 crs. per individual registered, when the society works in the capital or its suburbs: 4.15 crs. when it works in a provincial city and 3.65 crs. when it works in the country.

To decide disputes that may arise between doctors and the societies, a special board of 6 members is formed, three of the members being elected by the Central Sickness Insurance Societies Association and three by the General National Association of Doctors.

The six members elect a president.

BRITISH INDIA.

THE PROBLEM OF CATTLE INSURANCE IN INDIA. — Cattle form such an important part of the wealth of the small cultivator in India that very naturally a good deal of attention has been directed, since the success of the Indian co-operative movement has been assured, to the question of forming mutual cattle insurance associations among the cultivators themselves. Such associations have in fact been formed in considerable number in Burma; a few also have been formed in Coorg; and, in 1914, there was one, described as an experimental institution, in the United Provinces. In Burma there were 59 registered cattle-insurance societies on June 30th, 1914, but pending definite action upon a proposal to form a central reinsurance society the formation of local societies had been suspended. In Coorg the 9 societies which were working in 1914 were compelled, owing to the exceptionally high mortality among cattle due to drought, to suspend all operations that year from April to September. It is evident, therefore, that the experience of existing cattle-insurance societies in India has been too short to permit of any conclusions being drawn as to the prospects of success for co-operative insurance in that country.

Experience in European countries apparently does not furnish much guidance in attacking the problem in India. Mr. A. Yusuf Ali, I. C. S. (Retired) writing to the *Indianman* contrasts conditions in India with

those in England where there were 157 cattle insurance societies (popularly called "Cow clubs") in existence at the end of 1913. The writer uses the figures for 1912 when there were 130 societies in England and Wales, of which 22 were registered under the Friendly Societies Act. In these registered societies — the only ones for which annual returns are compulsory — the average membership was 71, the average number of animals insured per member was 3.1 and the average mortality rate was 2.4 per cent. of the insured animals. The insurance contributions levied worked out to an average of 4s. 1d. per animal insured which was sufficient to meet all claims. The reserves of the societies amounted to £ 4,881 — an average of nearly £ 222 per society, equal to five years' average losses.

In Great Britain there are no violent fluctuations of cattle mortality. Epidemic disease is rare and upon its occurrence is ruthlessly stamped out. The risks undertaken by cow insurance societies relate mainly to normal deaths and accidents. Elaborate precautions are taken to prevent the introduction of disease with imported cattle. Suspicious cases are slaughtered and compensation is paid by the Board of Agriculture, which in the case of insured cattle reduces the burden of liability for the societies.

In India, a very different state of affairs exists. There are no accurate statistics of the loss of cattle by death or accident. Cattle-disease (rinderpest, anthrax, foot-and-mouth disease or some other form) is nearly always prevalent, and many outbreaks of disease are never reported at all. The simplest sanitary precautions are neglected; segregation is considered a hardship; and the slaughter of cattle — even to prevent infection — would cause a riot. Moreover, the rate of loss among plough-cattle in India from starvation and neglect is very heavy even in normal times, and in periods of famine agricultural cattle perish wholesale in the affected districts. There are, again, numerous losses at all times from straying, theft, cattle-poisoning, floods, snake-bite and the depredations of wild animals.

The writer concludes: — "An insurance society will have to count on all these factors. They would make the premium rates so high as to be prohibitive for the average Indian small holder. English experience does not apply, first because the normal risks of cattle are much greater in India than in England, and, secondly, because the abnormal risks due to famines and epidemics are practically unknown in England."

GREAT BRITAIN AND IRELAND.

A SUCCESSFUL HORSE AND CATTLE INSURANCE CLUB IN CAMBRIDGESHIRE. — The publication of a Note in the October number of the *Journal of the Board of Agriculture* on the working of the Haddenham Cattle Insurance Club enables us to supplement the article on "Mutual Cattle Insurance in England and Wales" which appeared in our issue of October with the following description of a club which for many years has successfully insured both horses and cattle.

Haddenham is a rural village in Cambridgeshire and the club in quest-

ion was founded there in 1888. It accepts for insurance the horses and cattle of any stock owner within a radius of five miles from Haddenham, its operations covering in all eight villages, each of which has separate representation on the Committee which consists of 23 members. There are now 122 members, for the most part small holders, some of whom are actual owners of the land they cultivate. For the ten years ending 1913 the average number of horses insured was 223 and the average number of cattle 171. Each member insures on the average about 2 horses and 1.5 cows, the largest number insured by any one member being 10 horses and 4 head of cattle.

The entrance fee for a horse is 2s., for a cow 1s. 6d. A foal may be entered on or after the 24th June in each year and any calf may be entered when four months old. The subscription, payable monthly at each meeting of the Club, is 4d. per month for a cow, and 6d. per month for a horse. The Committee has power to make a levy of 1s. per head of stock for every loss sustained by the Club, and to increase such levy (if found necessary) at the next monthly meeting. Insured animals are not valued except when they fall ill or die. If the animal dies the value is paid to the owner in full, subject however to a maximum of £10 for a cow and £15 for a horse.

For the ten years the average death-rate per cent. per annum has been 4.5 for horses and 2.5 for cattle. The average amount paid in claims per annum has been £83. 17s. for horses, and £36. 11s. for cattle, equal to 7s. 6d. per animal insured for the former and 4s. 3d. per animal insured for the latter. As the monthly contributions amount only to 6s. per horse and 4s. per cow the regular income has not sufficed to pay the claims year by year. Besides the monthly subscriptions there is a small income from entrance fees amounting on the average to £8. 10s. a year, and from the sale of carcasses which are sold at a contract price of 25s. each carcass of whatever kind. Including receipts from all sources the total income has averaged £122. 2s. and, as the total expenditure averaged £126. 3s. there has been an average loss per annum of £4. 1s. The Club can always restore equilibrium by making a special levy as the Committee has power to do, but the writer in the *Journal* points out that much the better plan would be to raise the monthly premium from 4d. to 5d. for cows, and from 6d. to 9d. for horses. The premium for horses has hitherto been much too low in view of the facts that the mortality among horses has been almost double that of cows (4.5 per cent. as against 2.5 per cent.) and the maximum value payable is £15 for horses as compared with £10 for cows. By raising the rates of contribution as suggested the Club should in the future be in a position not only to meet expenses out of regular income but to build up a reserve fund as well. An even better plan (it is suggested) would be to abandon the fixed contribution and adopt the principle of a premium in relation to the estimated value of the animal. The owner, for example, might be required to pay 1 ½d. per £1 per quarter on the value of the animal, with a higher premium in the case of a brood-mare to cover the higher risk.

It should be mentioned that the costs of management in the Hadden-

am society are exceptionally low, averaging for ten years only \$5.158. per annum, equivalent to 3 1/2d. per animal insured.

SWITZERLAND.

NEW PROVISIONS REGULATING FOREIGN INSURANCE SOCIETIES WORKING IN SWITZERLAND. — The new Decree regulating foreign insurance societies working in Switzerland is of special interest for us, owing to the fact that, as already reported in our *Bulletin* (1), when speaking of hail and livestock insurance in Switzerland, some of those societies working in Switzerland undertaking agricultural risks are foreign societies. Such are, for example, the *Badische Pferdeversicherungs-Anstalt* a. g. of Karlsruhe (Baden), the *Garantie fédérale* of Paris and the *Perleberger Versicherungs-Aktien Gesellschaft* of Perleberg in Prussia, all engaged in insuring livestock. The question of the guarantee these societies should give had already been discussed in the Federal Chamber and had attracted the attention of the authorities of the Confederation, above all of the Federal Insurance Office. But after the outbreak of the war the matter became of vital importance.

The Federal Council, therefore, decided to issue provisions that might fully satisfy the Swiss citizens insured in respect to their interests, and decreed that all foreign insurance societies authorized to work in Switzerland must deposit security to the amount of 100,000 francs, and the premium reserves corresponding with their work in Switzerland. The increase in the amount of these reserves from date of January 1st, 1915, must be deposited exclusively in Swiss securities. The Federal Department of Justice and Police, says the Decree, may fix certain terms within which every society must deposit the whole amount of its security.

This decision is certainly very important. Indeed the premium reserves of the foreign companies corresponding with their business in Switzerland would amount to about 200,000,000 frs., of which about half would belong to German societies alone. The amount of these reserves increases every year by about five or six million francs. From this it may be seen that the foreign societies will have to deposit very large amounts in Switzerland.

In virtue of this measure taken by the Federal Council, the Swiss policy holders are secured in regard to the obligations undertaken by the societies in return for the premiums they have paid.

We must observe that France and Germany have anticipated Switzerland in this matter, and many years ago adopted legal provisions similar to the above, indeed, in some respects more severe than those now adopted by Switzerland.

(1) See the article *Agricultural Insurance in Switzerland in 1913* in the number of the *Bulletin of Economic and Social Intelligence*, for November, 1915 (No. 11).

Part III : Credit

SPAIN.

SOME NOTES ON THE WORK AND DEVELOPMENT OF THE " PÓSITOS. "

The work of modernising the " pósitos " and of converting their assets into cash having been begun by the Law of January 29th., 1906, the Royal Commission to which the task was entrusted by that Law has continued its efforts unceasingly since that date and, if it has not completely attained the desired end, has made steady progress in the undertaking. As illustrations of this and as indications of the agricultural and social development of Spain, the following notes are of special interest.

On other occasions we have spoken in this *Bulletin* of the origin and early character of the " pósitos," of the attainment of their highest development in the 16th. century and of their subsequent decline, as well of the deplorable condition into which they fell on account of abuses on the part both of borrowers and of managers, not to speak of the numerous losses incurred through loans made to the public treasury which were not repaid. We have also outlined the main provisions of the Law of 1906, which was passed with the object of reorganising these benevolent institutions, converting them into genuine modern organisations for supplying agricultural credit, as well as the work of the Royal Commission of " Pósitos," established for that purpose, and the principal results obtained. We need not, therefore, repeat what we have already said in previous issues, as the reader will find in them all the information necessary for a study of the question (1).

(1) See the following issues of this *Bulletin*: February, 1912 (pages 51 to 54); May 1913 (pages 137 to 139); June 1914 (pages 72 to 80) and March 1915 (pages 57 to 62).

§ 1. CONDITION AND WORKING OF THE " PÓSITOS " IN 1913 AND 1914.

At the time of the formation, in 1906, of the Royal Commission with the object of " investigating the funds and property of the existing ' pósitos,' realising their credits and converting their securities into cash, the condition of these organisations was such that it was not possible to ascertain accurately the amount of cash which they had in hand, nor of their property, nor the number nor amount of their credits. Nor was it possible to ascertain whether they lent out their funds or not, nor if they were invested as they should have been for agricultural purposes, such was the disorganisation and confusion which reigned in the management of the " pósitos."

The patient and steady work of the Royal Commission has gradually enabled it, in its annual reports, to throw light upon the state of the organisations with which we are dealing, as well as all the modifications and improvements which are being introduced.

According to the two last Reports (1913 and 1914) there were 3,537 " pósitos" in Spain on the 31st. of December, 1913, and 16 others were established in 1914.

During the year 1913 the " pósitos" granted 103,689 loans to the total amount of 16,812,287 pesetas. In 1914 the number of loans granted was 120,446, for a total amount of 19,194,495 pesetas. There was, therefore, in 1914 an increase both in the number and amount of the loans granted by the " pósitos," as compared with 1913. The increase in the number was 16.755 and in amount 2,382,207 pesetas, or 16 % and 14 % respectively.

To give an idea of the increase in the business of the " pósitos," we give the following figures, showing the amount of loans outstanding in each year from 1910 to 1914 :

Year	Loans outstanding (Pesetas)
1910	13,902,260
1911	16,307,587
1912	21,626,705
1913	21,357,782
1914	23,274,491

This increase of almost 10 millions of pesetas in the circulating capital of the " pósitos" shows clearly the steady renovation of the institution. To the 16 new " pósitos" established in 1914 the Royal Commission has advanced 25,025 pesetas, the promoters having, on their part, contributed 7,525 pesetas. The total foundation capital of these new organisations was, therefore, 32,550 pesetas, an average of 2,034 pesetas per " pósito."

By the exercise of a steady moral influence, it has been found possible to inculcate in the borrowing farmers habits of punctuality in the fulfilment of their obligations towards the "pósitos" which were formerly unknown to them. Accordingly the figure representing the voluntary repayment of loans continues to grow, thus increasing and regularising the assets of the "pósitos" and reducing the repayments enforced by legal procedure. The following figures show the steady increase of the voluntary repayments :

Year	Voluntary Repayments (Pesetas)
1910	15,239,898
1911	14,027,492
1912	18,003,015
1913	20,683,333

Moreover by reason of this moral progress of the borrowers the number of extensions of loans decreased during the year 1914, since 16,526 extensions of loans to a total amount of 4,079,995 pesetas were granted in that year whereas in 1913 the number of extensions granted was 17,477, and the total amount of the loans concerned 4,545,497 pesetas. This improvement is specially noteworthy since it was obtained notwithstanding the general economic crisis caused by the European War. In all probability, had the farmer been able to export and sell his crop as in normal times, the number of extensions asked for in 1914 would have been even less.

However, if the facts which we have just stated show important progress in the reorganisation of the "pósitos," especially if we bear in mind the deplorable state into which they had fallen, it cannot be said that the work has been completed, since it has not yet been possible to make all the "pósitos" work satisfactorily nor have they liquidated all their assets. Let us see some particulars in regard to this matter.

We have seen that, according to the Report for 1913 of the Royal Commission, there were 3,537 "pósitos" at the end of that year. The same report classifies these "pósitos" as follows in relation to their working.

(1) 2000 "pósitos" which work satisfactorily ; recover and lend out their funds regularly ; manage well their property ; pay their contribution to the Royal Commission and keep their accounts in order.

(2) 875 "pósitos" the working of which is defective in regard to the lending out of their funds, the recovery of debts, the payment of the contribution, and the keeping of the accounts, but which, nevertheless, are improving in their organisation, since they contain progressive elements ;

(3) 662 "pósitos" which may be considered as having only a nominal existence, since they have funds and do not lend them out, do not pay the contribution, and refuse to obey the instructions of the authorities.

In like manner, the total capital of these organisations, which at the same date amounted to 95,238,053 pesetas, may be divided, in round fig-

ures, as follows: about 4 million pesetas in hand and not lent; about 23 million pesetas in outstanding loans which are certainly recoverable; about 53 million pesetas in the hands of debtors on account of old debts, almost all irrecoverable, of which there is no prospect of more than a small portion being repaid. It may be noted, however, that of the amount representing the old debts, the greater part consists of interest which has accumulated for many years and that, consequently the capital really loaned was originally much less.

The provinces in which these debts, difficult to recover, are largest in amount, are the following:

Province	Amount of debts Pesetas
Almeria	2,055,141
Badajoz	1,798,752
Cadiz	3,902,583
Canary Isles	1,235,478
Cordova	7,227,270
Granada	4,388,818
Jaen	7,879,784
Malaga	7,451,244
Seville	7,964,188
Valencia	1,895,412

The recovery of the majority of these credits, in the opinion of the Royal Commission, would be difficult, if not impossible, since they are almost all derived from very old debts to which has accrued interest to an amount much greater than the principal (as we have noted), and the debtors are unable to repay them, either because the original borrowers have disappeared in the time which has elapsed since the loans were granted, or because they have not the means to repay so heavy a debt. In one way or another, the "pósitos" recover something from time to time under this head, so that the amounts are not to be considered as wholly lost.

Having noted some particulars regarding the condition and working of the "pósitos," let us now examine some forms of the work done by the Government and the Royal Commission towards making these organisations comply more fully every day with the modern requirements of agriculture and enlarging their sphere of action.

§ 2. THE REGULATIONS FOR CARRYING OUT THE LAW REGARDING THE FEDERATION OF THE "PÓSITOS."

In view of the fact that a considerable part of the aggregate capital of the "pósitos" — more than 4 million pesetas — remained lying idle even after it had been converted into cash, owing to the want of applicants

for loans in some localities and in others to want of zeal on the part of the managers, the Spanish Government issued a Decree on October 16th., 1914, authorising the formation of federations of "pósitos," in order to give mobility to their capital. We have already studied the Decree in this *Bulletin* (1), and have indicated the advantages which might result from it in the way of diffusing agricultural credit in Spanish rural districts. Although the Decree had been promulgated, however, the Regulations for carrying it out had not then been issued. These Regulations were approved and published by Royal Decree on the 30th. of September of the current year.

In speaking of the Decree regarding the federation of "pósitos" we saw that the bodies which would be formed in accordance with its provisions would have for object the unification and intensification of the action of the "pósitos" of which they would be composed in supplying agricultural credit, extending it to the whole province for the benefit of the farmers of the various districts where the affiliated "pósitos" exist. The Regulations with which we are now dealing indicate more precisely the objects of the provincial federations of "pósitos" as follows: (1) Loan transactions between the affiliated "pósitos;" (2) Making loans out of their funds, when none of the affiliated "pósitos" require them, to agricultural syndicates, rural credit banks, savings banks, popular credit banks, or similar organisations established in the province, which, besides being legally constituted, were included in the register compiled by the Bank of Spain; (3) Making loans of their capital on adequate security for the purpose of land improvement, irrigation works, or the introduction of new crops.

The duration of the loans made by the Federations will be for one year and may be extended for a further year, except for loans of the third class, which will be granted for a term of two years and may be renewed for a further period with the approval of the General Meeting. For such renewal, however, it will be an essential condition that the borrower shall have paid the interest up to date and shall reduce the loan by 25 per cent. when applying for the renewal.

The Regulations lay it down that the capital of the Federations of "Pósitos" shall be made up of:

(a) The funds which each of the affiliated "pósitos" had lying idle in its hands or on current account in the Bank of Spain;

(b) The sums which they may receive by way of gift or legacy from private individuals desirous of encouraging the development of the "pósitos" and of rural credit;

(c) The grants which may be made to them by the Royal Commission of "Pósitos;"

(d) The grants which in their respective estimates may be assigned to the Federations by the Provincial Council or by the Municipal Councils of the province.

In order to be able to ascertain the amount of the funds available under head (a), the Provincial Sections of "Pósitos" are to compile every

(1) See the issue of March 1915, pages 57 to 62.

three months a statement of the sums which the "pósitos" of the province have on deposit in the branches of the Bank of Spain, publishing it in the Official Bulletin and forwarding it at the same time to the Royal Commission. Corresponding to this provision is that whereby it will be obligatory for the Managing Committees of the "pósitos" to deposit in the branches of the Bank of Spain, in the name of the Committees, the sums which, for want of applicants, have not been lent out during the year. If in making up the accounts for the year it appears that a sum exceeding 15 % of the capital has been lying idle without being so deposited, the committeemen are to pay, out of their own pockets, 4 % interest on the sums left idle.

The Federations of "Pósitos" will be governed by a General Meeting, which will be held at least once a year, and by an Executive Committee consisting of two delegates and presided over by the Chairman of the Provincial Section. The delegates will be elected for three years by the General Meeting of the Federation, and will be eligible for re-election.

The business of the Federations will be carried on in two ways, according as the loans in question are applied for by affiliated "pósitos," or by agricultural syndicates, chambers of agriculture, savings banks or other similar bodies.

When the loans are asked for by one of the affiliated "pósitos," the procedure will be as follows: the "pósito" which requires to make use of the capital of the Federation, after having so decided either at an ordinary or an extraordinary meeting, will make application to the Executive Committee. The Committee will notify the other "pósitos" of the application received, at the same time asking for particulars, which must relate solely to the guarantee which the Managing Committee of the "pósito" making the application can offer, that Committee being liable to the "pósito" making the loan. The particulars having been received, the Executive Committee will decide in the matter within the space of three days. If the decision is favourable and the application is approved, the Committee will order the transfer of the amount from the "pósito" advancing the money to the "pósito" desiring the loan.

In the second case (that is, in the case of loans to syndicates, savings banks, chambers of agriculture, etc., there being no "pósitos" making application), the amount of the capital to be devoted to this purpose and the terms proposed for the loans to these societies (1) will be advertised in the official Bulletin of the province and the principal provincial newspapers. The bodies which desire to avail themselves of these offers will address themselves, stating the nature of the transaction they propose, to the Executive Committee, which will grant or refuse the loan, after having obtained the necessary particulars.

Membership of one of these Provincial Federations is reserved for the "pósitos" which belong to one and the same Provincial Section and which join the Federation. The other bodies which have transactions with the Federations are considered merely as borrowers.

(1) See the issue of this *Bulletin* previously indicated.

Finally, the Regulations of which we are examining the provisions, lay it down that the Royal Commission of "Pósitos" shall encourage the formation of as many Federations as possible, by carrying on propagandist work to this end, and shall compile an Annual Report on the working of the Federations based on the information which they may supply. The function of the Royal Commission in relation to the Federations will be merely that of inspection, and it will only have power to decide appeals made by any affiliated "pósito" against the decisions of the General Meeting of the Federation to which it belongs.

§ 3. THE ESTABLISHMENT OF THE FIRST PASTORAL "PÓSITO."

As the operations of the "pósitos" originally consisted almost exclusively in making advances of seed to the farmers, the benefits conferred upon one of the most important elements in Spanish agriculture — stock-raising — have always been few or almost none. Even after the work of converting the assets of the "pósitos" into cash was begun, this continued to be the case, notwithstanding that the Law of 1906 indicated amongst the objects of these organisations the granting of loans for facilitating the "acquisition or use of any articles required in agriculture or stock-raising." In essentially pastoral districts, such as Galicia and the Basque Provinces, no "pósito" yet exists.

After the promulgation of the Law of 1906, it was considered that, when once reorganised, the "pósitos" should admit the stockowners to their advantages, and thus, from the beginning, it was suggested to form new institutions, based on the modern organisation introduced by the law, for exclusively pastoral purposes, since the existing "pósitos," being far from the pastoral regions, could be of but little advantage to the pastoral industry.

The Count of Retamoso, one of the first Royal Commissioners of "Pósitos," endeavoured during his term of office to found a pastoral "pósito," without, however, being able to carry out his project. What on that occasion remained merely a project has now been actually carried out, thanks to the combined efforts of the Royal Commission of "Pósitos," at present presided over by the Marquis of Valdeiglesias, and of the General Stockowners' Association, of which the Duke of Bailén is President.

Passing to examine the organisation of this new body, we note first that in its rules the objects are stated to be: (1) to make loans to stockowners, syndicates and co-operative societies, formed for exclusively pastoral purposes; (2) to make loans to the Local Stockowners' Committees, which are duly constituted and in which the liability of the members is unlimited; (3) to make loans to stockowners who are members of the General Stockowners' Association, on mortgage, pledge, or personal guarantee; (4) to act as a savings bank, paying interest which shall not exceed 3 %.

The capital of the "pósito" will be formed by :

- (a) The initial capital of 100,000 pesetas;
- (b) The profits derived from its transactions;
- (c) The grants and gifts which it may receive.

To the formation of the initial capital the Royal Commission of "Pósitos" contributed 50,000 pesetas and the General Stockowners' Association the remaining 50,000 pesetas.

With regard to the operations of the new organisation, its rules lay down the following conditions. The syndicates, stockowners' co-operative societies and Local Committees, will address their applications to the Permanent Committee, accompanied by documents which will show the unlimited liability of the members and the liquid taxable assets which they possess, as well as the taxes which they pay.

A Committee, nominated by the Permanent Committee, will examine the application and will grant or refuse the loan, and no appeal can be made against their decision. The loans will be granted for one year, renewable for another year; interest will be payable at the rate of 1 % per quarter, fractions of a quarter being treated as a quarter.

When the loan is being applied to the acquisition of machinery or requirements for the pastoral industry, or industries derived from it, the "pósito" can advance two thirds of the price, retaining the article purchased as its own property, though in the use of the purchaser, until the price has been paid in full. It will also advance money for the purchase of sires to the livestock improvement syndicates, the animals purchased forming the security for the repayment of the loans.

The "pósito" can even, in specific cases and with the consent of the Committee, assist the mutual insurance societies, subject to the following conditions : (1) that they are mutual societies of stockowners, that the liability of the members is unlimited, and that they do not exclude losses caused by epidemics; (2) that their rules have been approved by the General Stockowners' Association.

The loans to stockowners who are members of the Association will be made on pledge, on mortgage, or on the joint and several security of the applicant and another person approved by the Committee.

The stockowners who have delivered wool, live stock, or other pastoral produce to the Association for sale on commission, or who graze cattle on the pasture-land or meadows of the Association, will have the right to obtain, if they so desire, 50 % of their value, as an advance from the funds of the "pósito."

No stockowner or society to whom a loan has been granted will be able to obtain another loan until the first has been repaid, unless he specifically applies for an increase, justifying his need and giving a new guarantee.

The management of the "pósito" is entrusted to a special Committee, consisting of six members and nominated from amongst the Permanent Committee. The members of the Permanent Committee will not receive any remuneration and the sums which may be received under this head will be

ceded over to the Association to meet the expenses which may be incurred regard to the "pósito."

The "pósito" will pay to the Royal Commission, by way of contribution, $\frac{1}{10}$ on the 50,000 pesetas granted by it. In its turn, the "pósito" will receive as remuneration, half of the amount of the interest paid on the loans.

Lastly, we may note that the "pósito" is founded for an indeterminate period. It can be dissolved by resolution of the General Committee of the General Stockowners' Association. In case of the dissolution of the "pósito" the Association will repay to the Royal Commission of "Pósitos" the 50,000 pesetas received from it, with the increase which may have accrued to it.

From what precedes, it will be seen that this first pastoral "pósito," which has just been formed in Spain to encourage stock-raising is still of modest dimensions, as far as the number of stockowners who may aspire to benefit by it is concerned. That is due to the fact that the new organisation regarded as an experiment. If in practice the new "pósito" fulfil, as is anticipated, the hopes of its founders, it will be able to obtain, later on, a larger capital and thus convert itself into a veritable, though small, pastoral bank. In Spanish rural circles the success of the new organisation is considered assured, in view of the ease and convenience of its operations, the importance and prestige of the General Stockowners' Association, under whose auspices it has been formed, and the capacity and standing of its managers.

The new "pósito" certainly meets a need which was strongly felt and may be the starting point of a form of credit organisation which may bring important improvements and advantages to stock-raising and the industries derived from it.

ITALY.

WORK OF THE LAND CREDIT INSTITUTES IN 1914.

SOURCES:

- CASSA DI RISPARMIO DELLE PROVINCE LOMBARDE IN MILANO: Credito fondiario. Bilancio consuntivo dell'anno 1914. ANNO XLVII dell'Esercizio (*Savings Bank of the Lombard Provinces in Milan: Land Credit Department. Balance Sheet for the Year 1914. Forty seventh Working Year*).
- CASSA DI RISPARMIO IN BOLOGNA: Credito fondiario: Resoconto del 1914 (*Savings Bank in Bologna: Land Credit Department: Report for 1914*). Bologna, 1915; Merlani.
- CASSA DI RISPARMIO DELLA CITTÀ DI VERONA: Cassa di Risparmio, Credito fondiario e Fondo pensioni. Bilancio Consuntivo dell'anno 1914 (*Savings Bank of the City of Verona: Savings Bank, Land Credit and Pension Funds Departments. Balance Sheet for the Year 1914*). Verona, 1915; Franchini.
- CREDITO FONDARIO SARDO IN CAGLIARI: Resoconto dell'anno 1914 (*Sardinian Land Credit Institute in Cagliari: Report for the Year 1914*).
- ISTITUTO ITALIANO DI CREDITO FONDARIO IN ROMA: Relazione del Consiglio d'amministrazione e dei Sindaci sull'esercizio 1914 (Ventesimo quarto). (*Italian Land Credit Institute in Rome. Report of the Board of Management and the Examiners for the year 1914. Twenty fourth Year*). Rome, 1915; Bolognesi.
- ISTITUTO DELLE OPERE PIE DI SAN PAOLO IN TORINO: Credito fondiario. Conto consuntivo: esercizio 1914 (*Institute of the "Opere Pie di San Paolo" in Turin: Land Credit Department, Balance Sheet for the Year 1914*). Turin, 1915; Società Tipografico-Editrice Nazionale.
- MONTE DEI PASCHI DI SIENA: Conto consuntivo per l'esercizio 1914 (*Siena "Monte dei Paschi": Accounts for the Year 1914*). Siena, 1915; Lazzetti.

In the number of this Bulletin for last October we considered the work done in 1914 by the special agricultural credit institutes or those authorized by special laws for this form of credit and we saw that they granted the farmers last year more than 43,000,000 frs. in loans; let us now consider the work done in the year by the land credit institutes, according to the last reports published by them.

§ I. ITALIAN LAND CREDIT INSTITUTE.

In 1914 this Institute, which has existed for 24 years, received 247 applications for loans for 28,127,500 frs. Adding to these those remaining to be dealt with from 1913 (475 for 42,951,500 frs.), and those again taken

into consideration (9 for 642,000 frs.) and those in the case of which application has been made for the amount to be increased (3 for 281,500 frs.) we get for 1914 a total of 734 applications for an amount of 72,002,500 frs.

In satisfaction of 116 of these, definite contracts were passed for a total amount of 10,721,000 frs., with a decrease of 60 loans for 4,481,500 frs., as compared with 1913. Of the loans granted in 1914, 57 for 6,022,500 frs. were granted on the security of rural land, especially in Apulia (12 for 1,323,000 frs.), in Campania (10 for 331,500 frs.), in Sicily (8 for 351,500 frs.), in Venetia (5 for 1,767,500 frs.) and in Emilia (5 for 1,066,000 frs.), and 59 for 3,798,500 frs. on the security of urban land. In this connection, we must observe that in the last five years the loans on urban estate, which for some time exceeded those on rural estate, have been gradually diminishing, so that in 1913 and 1914 those on rural estate preponderated. As regards amount, the loans granted in 1914 were distributed as follows:

	Number	Amount frs.
Up to 10,000 francs	5	45,500
Between 10,500 and 20,000 francs	25	401,000
» 20,500 » 50,000 »	42	1,476,000
» 50,500 » 100,000 »	20	1,599,000
» 100,500 » 500,000 »	22	4,499,500
Above 500,000 francs	2	2,700,000
	116	10,721,000

And they were distributed as follows according to the term for which they were granted.

Years	Number	Amount frs.
From 10 to 15	4	106,500
» 15 » 20	3	132,500
» 20 » 25	5	214,000
» 25 » 30	8	153,000
» 30 » 35	—	—
» 35 » 40	51	3,621,000
» 40 » 45	—	—
» 45 » 50	45	6,494,000
	116	10,721,000

The loans were granted at 4 % interest.

The total number of loans passed from the foundation of the Institute (1891) up to December 31st., 1914 was 3,327, for a total amount of 270,206,550 frs., of which 1,911 for 142,915,300 frs. were granted on the security of rural estate and 1,416 for 127,291,250 frs. on that of urban estate. Dividing them according to the situation of the land mortgaged, we find: loans in North Italy, 139 for 15,199,500 frs.; in Central Italy, 1,028 for 102,603,100 frs.; in South Italy, 2,160 for 151,603,950 frs. More than two thirds of these loans were for amounts not exceeding 50,000 frs. Between 1903 and 1914, the loans granted by the Institute amounted to 162,704,550 frs.; of this amount, 71,965,825 or 44 % were borrowed to extinguish more burdensome mortgage debts and relieve the estates from other real charges. The mortgages paid off in the above period, by means of these loans, amounted to 70,655,936 frs., distributed as follows: regard to the interest paid:

	frs.
From 4 to 6 %	52,858,799
» 6 » 8 %	11,734,264
» 8 » 10 % and higher . . .	1,226,955
Interest not stated	4,835,918

The benefit reaped by landed estate in the twelve years by the extinction of mortgages to the above amount of 70,655,936 frs. is still more apparent when we consider that they were mostly extinguished by means of loans at 3 ½ %. It is especially interesting to consider how the amounts employed for relief from charges and for extinction of burdensome mortgage debts were distributed in the different parts of the Kingdom.

	frs.
North Italy	3,452,970
Central Italy	26,486,401
South Italy	42,026,454
	<hr/>
	71,965,825

It follows, therefore, from these figures that South Italy especially profited by the operations between 1903 and 1914, to the amount of 42,026,454 frs. or about 58 % of the total. North Italy benefited to the amount of 3,452,970 frs. or 5 %, and Central Italy to that of 26,486,401 frs. or 37 %.

§ 2. THE LAND CREDIT DEPARTMENT OF THE SAVINGS BANKS
OF MILAN, BOLOGNA AND VERONA.

In 1914, the Land Credit Department of the *Cassa di Risparmio delle Provincie Lombarde* (Savings Bank of the Lombard Provinces) granted 274 loans for an amount of 19,651,000 frs. Ninety-four loans, for 7,124,000 frs., were granted on rural land, 170 for 11,977,000 frs. on urban land and 10 for 550,000 frs. on land both rural and urban.

Among the provinces that profited most by this credit on the security of rural estate, were especially those of Mantua, 25 loans for 1,615,500 frs., Grosseto, 2 for 770,000 frs., Modena, 6 for 618,000 frs., Udine, 2 for 615,000 frs. and Venice, 3, for 457,000 frs.

More than half the loans (169) were for amounts between five and fifty thousand francs and about half (132) for a period of 40 years.

In 1914 the Land Credit Department of the *Cassa di risparmio di Bologna* granted 89 loans for a total amount of 4,798,000 frs. Of these, 64 for 3,237,000 frs., were secured on urban estate, 19 for 391,000 frs. on rural estate, and 6 for 1,170,000 frs. on estate both rural and urban. Further, 6 loans were for amounts of between 500 frs. and 5,000 frs., 12 for amounts between 5,000 frs. and 10,000 frs., 21 for amounts between 10,000 frs. and 20,000 frs., 22 for amounts between 20,000 frs., and 30,000 frs., 5 for amounts between 30,000 frs. and 40,000 frs., 7 for amounts between 40,000 frs. and 50,000 frs., 8 for amounts between 50,000 frs. and 100,000 frs., and another 8 for amounts exceeding 100,000 frs.

The province that benefited most by this credit was Bologna (78 loans for 4,525,000 frs.).

It must further be mentioned that, of 89 loans, 30 were granted to institutions for building houses for the people, for which purpose this Institute had on December 31st. last lent 5,226,000 frs.

Between the foundation of the institution (1868) and the end of 1914 3,290 loans were passed for a total amount of 127,253,500 frs., with an average amount of 38,679 frs. per loan.

Finally, the Land Credit Institute of the *Cassa di risparmio di Verona* granted in 1914, 67 loans on mortgage for a total amount of 2,061,000 frs., against 108 loans for 3,368,500 frs. in 1914.

Between 1902, its first working year and the end of 1914, 1,011 loans were granted for a total amount of 30,429,500 frs. Of these, 306, for 6,121,000 frs. were granted on the security of urban estate, 638 for 21,880,000 on that of rural estate, and 67 for 2,428,500 on estate both rural and urban. The largest amounts were lent in the province of Verona (6,838,500 frs.), Venice (5,537,500 frs.), Mantua (4,589,000 frs.) and Padua (3,376,500 frs.).

§ 3. THE LAND CREDIT DEPARTMENTS OF THE TURIN INSTITUTE
OF "OPERE PIE DI S. PAOLO" AND THE SIENA "MONTE DEI PASCHI"
AND THE SARDINIAN LAND CREDIT INSTITUTE IN CAGLIARI.

The loans concluded in 1914 by the Land Credit Department of the *Istituto delle Opere Pie di S. Paolo* in Turin were more numerous and less in amount than in 1913. Indeed, while in 1913 it granted 195 loans for 9,362,500 frs., in 1914, 204 loans were granted frs. 7,006,500 frs., that is to say 9 loans more and 2,356,000 frs. less.

As regards amount, the loans granted in 1914 were distributed as follows:

	Number	Amount
Loans of not more than 10,000 frs.	94	568,000
» » between 10,500 frs. and 20,000 frs. . .	37	601,000
» » » 20,500 frs. » 100,000 frs. . .	59	2,830,500
» » » 100,500 frs. » 500,000 frs. . .	14	3,007,000
Total . . .	204	7,006,500

In regard to the terms for which they were lent, they may be classified as under:

	Number	Amount
Loans for from 10 to 20 years	23	509,000
» » between 20 and 35 years	23	604,000
» » » 35 and 50 »	158	5,893,500
Total . . .	204	7,006,500

Finally, in regard to the nature of the estate mortgaged, we find:

Loans on Urban Estate		Loans on Rural Estate		Loans on both Urban and Rural Estate		Total	
Number	Amount	Number	Amount	Number	Amount	Number	Amount
184	4,833,000	16	1,890,500	4	283,000	204	7,006,500

The largest number of loans were received in the provinces of Genoa (100 for 1,453,000 frs.), Turin (55 for 1,821,500 frs.) and Rome (16 for 598,500 frs.).

We find that the Land Credit Department of the *Monte dei Paschi di Siena* in 1914 passed 202 loans for the total amount of 5,116,500 frs., 79 of them (2,609,500 frs.) secured on rural land, 116 (2,348,500 frs.) on urban land and 7 (158,500 frs.) on both urban and rural land.

The province of Forlì received the largest number of loans (38 for 325,500 frs.), and then the provinces of Perugia (26 for 525,500 frs.), Pisa (21 for 709,500 frs.) and Pesaro and Urbino (10 for 237,000 frs.).

Since the date of its foundation (1868) and up to December 31st., 1914, this Institute granted 4,837 loans for a total amount of 154,143,500 frs., 1,236 for 79,735,000 frs. on rural estate, 1,722 for 32,624,500 on urban estate, and 879 for 41,786,000 frs. on estate both urban and rural.

Finally, the *Credito fondiario sardo in Cagliari* granted mortgage loans in the year to the amount of 229,000 frs. The amount of its loans on December 31st., was 2,316,640 and the value of its bonds in circulation was 2,382,500 frs.

* * *

The seven land credit institutes working in Italy thus granted in 1914 mortgage loans for a total amount of 49,583,000 frs. against 62,846,500 frs. in 1913, 76,249,750 frs. in 1912, 78,896,000 frs. in 1911, 74,111,500 frs. in 1910 and 59,713,800 frs. in 1909.

Part IV: Miscellaneous

UNITED STATES.

THE NEEDS OF AMERICAN FARM WOMEN: AN ENQUIRY BY THE DEPARTMENT OF AGRICULTURE.

SOURCES:

- SOCIAL AND LABOR NEEDS OF FARM WOMEN. United States Department of Agriculture, Report No. 103, Washington: Government Printing Office, 1915.
- DOMESTIC NEEDS OF FARM WOMEN. United States Department of Agriculture, Report No. 104, Washington: Government Printing Office, 1915.
- EDUCATIONAL NEEDS OF FARM WOMEN. United States Department of Agriculture, Report No. 105, Washington: Government Printing Office, 1915.
- ECONOMIC NEEDS OF FARM WOMEN. United States Department of Agriculture, Report No. 106, Washington: Government Printing Office, 1915.
- WHAT THE DEPARTMENT OF AGRICULTURE IS DOING FOR THE HOUSEKEEPER. C. F. Langworthy. Yearbook of the United States Department of Agriculture, 1913. Washington: Government Printing Office, 1914.
- REPORT OF THE SECRETARY OF AGRICULTURE FOR 1913. Yearbook of the United States Department of Agriculture. Washington: Government Printing Office, 1914.
- A PRACTICAL NATIONAL MARKETING ORGANIZATION AND RURAL CREDIT SYSTEM FOR THE UNITED STATES. A Hearing before the State Department, June 21, 1915. Washington: Government Printing Office, 1915.

INTRODUCTION.

In his annual Report to the President (Dec. 1st, 1913), the Secretary of Agriculture of the United States devoted a special paragraph to the "Woman on the Farm", from which we quote the following:

"The woman on the farm is a most important economic factor in agriculture. Her domestic work undoubtedly has a direct bearing on the effi-

ciency of the field workers, her handling of the home and its surroundings contributes to the cash intake, and, in addition, hers is largely the responsibility for contributing the social and other features which make farm life satisfactory and pleasurable... The facts that the woman's work and time have a real monetary value and that her strength is not unlimited have not been given the consideration they deserve. As a result on many farms where there is always money enough to buy the latest agricultural appliances, there is seldom a surplus to provide the woman in her productive work with power machinery that will lighten her physical labor, running water that will relieve her of the burden of carrying from the pump all water used in the household, or kitchen equipment and household devices that will save her time, increase her efficiency, and enable her to make important monetary saving. The Department believes that intelligent help to women in matters of home management will contribute directly to the agricultural success of the farm. It purposes, therefore, to ask Congress for means and authority to make more complete studies of domestic conditions on the farm, to experiment with labor-saving devices and methods, and to study completely the question of practical sanitation and hygienic protection for the farm family."

In making this recommendation the Secretary of Agriculture is faithful to the traditions of his Department, the activities of which are not only legislative and administrative, but more especially educational, on broad lines of national development and conservation. The general activities of the Department are, indeed, defined as follows in the Yearbook for 1913

"Broadly speaking, the Department of Agriculture is concerned with such matters as the production of crops, timber, and flocks and herds with studies of plant and animal diseases and their control, with the establishment of standards of quality, with the protection of agricultural products from adulteration, with the processes for converting raw products of agriculture into finished products ready for use, with insect enemies and their control, with agricultural engineering problems, with rural economics, with rural life and activities, and with educational problems pertaining to all of these. Information is gathered in the field, in the laboratory, and in other ways, and the results are spread broadcast by means of publications, demonstration work, through the agricultural colleges, and through other organized methods of education.

"In answering the questions which arise in the minds of the producers on the farms the investigator almost inevitably furnishes information about the commodities which the housekeepers buy and use and whose composition they should understand. Help for the housekeeper, who directs the spending of the family income, or, as the economist would put it, represents consumption, is, in fact, not only one of the inevitable by-products, but one of the very valuable main products of agricultural research, and is clearly recognised as such by the Department."

To ascertain the fields in which farm women desire specific assistance, the Department of Agriculture addressed, on October 1st, 1913, a letter of inquiry to the housewives of 55,000 progressive farmers in all the

counties of the United States. This letter asked no questions and left every woman free to discuss any need which occurred to her. She was invited to take the matter up with her neighbours, and make a reply which represented not merely her personal need but the recognised need of the women of her community. Replies were received from over 2,000 women living in all parts of the country, and a careful examination of these replies led to the publication of four reports on the social and labour, domestic, educational, and economic needs of the farm housewife. These reports consist mostly of classified extracts from the answers received by the Department, and throw valuable light on the economic and social status and the special needs and aspirations of the American farm woman.

One of the reasons given by the Department for the publication of these reports is that they contain suggestions which may prove helpful to the State agencies in carrying out the recently enacted Smith-Lever Extension Act, (May 8, 1914). This act, starting with a grant of \$10,000 of Federal moneys to each State for agricultural extension and educational purposes, will, by increasing appropriations, make available in 1922 and thereafter a sum of \$4,580,000 of Federal funds for such purposes. Under this act the States must duplicate with their funds all but \$480,000 of each annual Federal appropriation, so that after 1921, if the States elect to receive their full quota, the sum of \$8,660,000 will be spent each year in practical on-the-farm education. In the first nine fiscal years a total of \$41,920,000 should be directed to this purpose.

The funds appropriated under this Act are given to the State agricultural colleges to enable them to employ men and women as county agents and experts who will move about among the farming people, demonstrate good methods of agriculture and home economics, co-operate with them in studying their farm and home problems, and assist them in the adoption of better methods on their farms or in their homes.

Already many of the colleges have appointed women as extension experts in home economics, and others are planning to do so. In nearly all the Southern States women county agents are already at work in connection with the demonstration work carried on by the agricultural colleges and the United States Department of Agriculture. These agents will enroll women in home demonstration work and will continue to conduct girl's clubs. They will have the women demonstrate the preparation and use of products from canning clubs, poultry clubs, pig clubs, and the winter garden. Accompanying the use of the club products, the women on the farms will be shown how to make or secure labour-saving devices and conveniences. They will also be encouraged by the county agents to find and extend to others the best methods of work and conveniences already discovered and in use in their communities. The number of home economics experts who are doing work among the farm women is being rapidly increased. It is hoped that before long there will be women agents in every county in the United States.

§ I. SOCIAL NEEDS OF FARM WOMEN.

Let us now examine the social conditions of the American farm woman as revealed by herself in the letters published in the first of these reports.

The first impression received on reading this interesting human document is that the standard of life of the American farm woman is high indeed when compared to conditions generally prevailing among her sisters in other countries. When asked to state her needs, it is not to the necessities of life that she lays claim, but to its comforts and pleasures. The loneliness, isolation, and lack of social and educational opportunity on the farm, these form the main text of letters from all parts of the United States. The following quotations are typical:

New York. — "The hardest phase of country life for the women in my neighborhood is the monotony, with no means or opportunity for any social life whatever... Life is dreary indeed with never an afternoon or an evening spent away from home."

Ohio. — "In all these years I have never had a vacation, never belonged to a club or any organisation, and never went to church or an entertainment; had no time to visit a neighbor — just worked early and late with a snatch for reading between."

Wisconsin. — "The woman has no time to give to the little feminine accomplishments enjoyed by women and no opportunity to use the sitting room and its easy chairs."

But that there is a bright social side to American farm life is shown by the following from an Iowa correspondent:

"The farmers' wives on farms in Iowa have rural delivery, phones to call up any neighbor, and electric machinery to drive the washer, pump and cream-separator. And now with the auto to take them where they please, with the good moral atmosphere in which to raise a family, the long winter evenings with the family at home, with good books and papers, the country beats the city, with all its nervous strain, all to pieces."

The following quotation, in contrast with the spirit of many others, shows a wholesome appreciation of the fact that a government cannot legislate on "happiness."

"I really do not see what the government could do to better my condition. The government owes me protection of life and property, but my happiness I must work out myself. Law-making to affect our home and family affairs is not necessary; we make our own laws in these matters."

(1) *Womens' Clubs and Co-operation.*

As a remedy for the social drawbacks complained of, many of the letters urge co-operation among women in the form of neighbourhood club. These, it is claimed, would promote better education in practical matters.

and fuller social and intellectual life. This idea is clearly expressed by a Connecticut correspondent :

"The department should aid farmers' wives in the formation of clubs that will bring them together for sociability, recreation, and a reasonable amount of intellectual intercourse. A nearby country community has a club of the sort we mean. It will have a certain topic assigned for each meeting, music or possibly readings or recitations, and then a kind of open forum for the discussion of everything, from the chestnut blight to the Volturno disaster. Refreshments are served. This kind of thing brings farm women out of their isolation into an atmosphere of clubability and cheery common interest. The monotony of farm life is one of the trials women have to bear; the Department may help to relieve it."

Many correspondents express the idea that such clubs, which might be a by-product of the rural church and the rural school, would secure to women opportunities for social intercourse and also, if connected with lending libraries and reading classes, might train them to read intelligently.

In the Middle-Western and North-Western States, where population is scanty and distances great, the dull monotony of the farmers' life is the burden of complaint. "We want suggestions for high-grade amusements for leisure hours by means of such moderate priced talking-machines and picture shows as will best develop individual character and give knowledge of the great outside world", writes a Colorado woman. Another suggestion made by many is for the organisation of village rest-rooms where farmers' wives could meet when going to market in town.

(2) *The Labour Question.*

The difficulty and, in many cases, the impossibility of securing any kind of domestic help in many districts entails long hours and overwork for the housewife, and the Department is urged by its correspondents to place immigrants in farm occupations. "Why can't an agricultural official be at Ellis Island and get hold of the immigrants who want and ought to farm, and by keeping in touch with farmers in every State know where to send them?", writes an Ohio woman.

With regard to this the Report points out that the Division of Information in the Bureau of Immigration, United States Department of Labour, is engaged in an effort to promote a beneficial distribution of admitted aliens and other residents. With that end in view the Department of Labour has established 18 distributing centres, covering the entire country, with an office or offices in each zone. The particular features of this undertaking of interest to women are the effort to direct from congested centres of population to the farms and rural communities men, women and girls to engage in farm or domestic work, and the opportunities that will be presented to women to engage in seasonal occupations on farms or in other rural communities.

Replies received from the Southern States indicate the poorer condition of those farming populations as compared with those in other sections.

They complain of the heavy field work, cotton hoeing and picking which falls to the lot of the Southern farm woman, particularly to the wife of the poor tenant farmer. One correspondent, a man, writes :

"It is the wife of the tenant and poor farmer who needs help. She has a hard roe to hoe. She has very few labor-saving implements, no electrical or gasoline power, but does nearly all her work by "main strength and awkwardness." Thousands rise at 4 a. m. and peg away until 10 p. m. The Union man and "industrial worker" does his eight hours... and then agitates for shorter hours and more pay, but the wife of the tenant or poor farmer has no time to agitate, strike, or walk out. Her pay is plain board and clothing. Very few ever see a State fair, get a week's vacation, or even an auto ride."

And again :

"The condition of the farm women of the South is most deplorable... The routine of the southern farm woman is about as follows : at this time of the year she is up at 5 a. m. preparing the breakfast, often building up her own fire ; milks the cows, cares for the milk, churns the cream by hand. Puts the house in order, gets the dinner, eats with the family at noon ; leaves the house in disorder, goes to the cotton field and picks cotton all the afternoon, often dragging a weight of 60 pounds along the ground. At about sundown she goes to the farmhouse, puts the house in order, washes the dishes left over from the noon meal, prepares the supper, most of the time too tired to eat ; gets the children to bed, and falls asleep herself, and so it goes on from day to day. Somehow she finds the time to do the washing and ironing, mending, knitting, and darning in between times. ...The above description applies to negroes, to white tenants, and to the young farmers who are trying to build their homes."

(3) *Co-operation in the Home.*

The successful operation of co-operative creameries and cheese factories suggests to many housewives the application of the same principles to housework. Co-operative laundries and bakeries are advocated, and the Department is asked to supply information as to the cost of installing such institutions. Also the co-operative boarding of farm-hands is suggested as a means of relief for the overworked farm-woman. These ideas are expressed by a number of women from all sections. We quote the following :

"The only thing in sight to lighten the burden of the indoor worker is co-operation. We have arrived at a place where individual effort in many things has proven to be wasteful in cash and human energy, and we are making new discoveries along that line. The thing that presents itself forcibly to my mind is a community plant for doing the laundry work, making the sausage, rendering the lard, canning and evaporation of fruits and vegetables for the farmer's use. Such a plant for the accommodation of from 25 to 50 families, or, in other words, one for the convenience of the patrons of each district school, would cost from \$ 700 to \$ 1,000, building included."

Michigan. — "Co-operation in housework we believe is still in the experimental stage, but if it could be profitably established in a community it would leave the housewife much more time to devote to her children, the garden, and her chickens."

(4) *Roads, Mails and Telephones.*

Coming down to practical matters in which the Department could take the lead, women and men in almost every State hold that the greatest service which it could render to the farm population would be the systematic improvement of country roads. Many make a point that roads especially adapted to winter conditions would have a very important social effect. During the summer months the farm population, especially the women, are too busy to do much visiting and by the time the crops are marketed and some leisure and recreation are possible, the roads are so muddy that it is impossible or very difficult to drive over them, with the result that during the winter months the women can seldom reach a town or even visit their neighbours.

Next to this comes the demand for the extension of rural free delivery of mails. However, it is pointed out that since the Department made its enquiry a number of changes in rural delivery systems and in the parcel post service have been made which, in a large measure, comply with these requests.

The value of the telephone as an assistance in the marketing of their produce as well as its use as a social factor, is dwelt on by several correspondents who urge the advantages of Government ownership. On this head a Kansas woman writes :

"Give us better telephone service. Here in Kansas the farmhouses are from one quarter to half a mile apart and often from 1 to 2 miles to the neighbor we are most interested in, so you can readily see that a good telephone service means much not only to the farm woman but to the farm also. We are now supplied with several different systems. Some have no connection whatever with each other, others connect by charging toll. We are 18 miles from a city. The telephone toll is 15 cents. The prices of our farm products are regulated by the city, but we cannot afford to pay the toll to inquire the price of poultry or fat stock many times before starting with a load, so we have to depend on the local buyer who charges a big commission".

§ 2. DOMESTIC NEEDS OF FARM WOMEN.

Perhaps no section of the report gives so vivid an idea of the difference in the standard of comfort of the American and European farm-woman as the one dealing with domestic needs. Conveniences which are only just

beginning to enter the homes of the well-to-do city dweller in Europe are here referred to as necessities, and their absence is regarded as a hardship.

The peculiar American genius for labour-saving machinery is here brought to bear on the home, and mechanical devices for washing, cooking, cleaning, etc., are claimed by the American housewife as her due and their extensive application is expected to result in time and opportunity for social intercourse and intellectual development by means of which the household drudge will evolve into the business partner of her husband and the educator of her children.

(1) House Planning and the Installation of Labour-saving Machinery.

Many correspondents ask the Department to send out plans for the construction of model farmhouses which will be cheap, convenient, and attractive.

"The country houses are ill planned with very few modern conveniences. The men don't care how hard the women work to do their tasks if only they themselves are provided with food regularly and their own comfort looked after. The fact that women are forced to go pump, and carry water from the well, that they work in dark, poorly lighted rooms, that they mop hardwood floors, take millions of needless steps a year to accomplish their work because of the way the house is planned, that they spend hours upon hours a year cleaning dirty kerosene lamps and lanterns that give no light after they are cleaned, that their whole house is infested with flies in summer because porches are not screened — all these facts and many more unpleasant conditions matter not to the men." So writes a New York farm-wife, to quote only one of many similar letters.

The desire for a more attractive home is evidently strong and widespread. In addition to seeds, bulletins and books on the most attractive ways of laying out grounds are requested by many. The feeling is general that the attractiveness of one's surroundings is of more importance than the practical farmer is inclined to consider, and that the Government might, therefore, take steps to remedy the consequent neglect.

That any device which will lessen labour in the fields is purchased without hesitation but that no labour-saving devices are introduced into the home is an almost universal grievance. Among the appliances for which there appears to be the most demand are vacuum-cleaners, washers, wringers, separators, power for lighting and various other purposes, better systems of heating, oil-stoves, gasoline or electric irons, etc. We quote at random from a few typical letters received on this head:

Massachusetts. — "The problem is to awaken a different ideal of farm life — an ideal that gradually, and with the new generations, will set her part in its proper relation to that of the farm man, and will give effective and intelligent attention to providing efficient devices and conveniences for her use. It will try to lead her out of old customs into employing these better conveniences and to give intelligent thought to the planning of her work

so that she may have it well in hand with time for relaxation and other interests".

Connecticut. — "The Department should demonstrate and then approve in some way, as they see fit, the following: the best cookstove, one that will do the best work with the least fuel, coal or wood; also washing machines, dishwashers, vacuum sweepers, etc. As it is, none of these machines have a stamp of approval. Agents sell to all who will buy, and the result is thousands of dollars are invested in worthless goods that soon find a resting place in the garret, and the poor housewife struggles harder than before, for often the money to buy this needed help has been borrowed, which makes another weight to an already heavy burden."

Michigan. — "There are no modern conveniences for her use, such as water in the house, bath, modern lights, vacuum-cleaners, etc., and often not even such unexpensive things as oilstoves, washing machine, gasoline iron, breadthixer, and many other such items which help so much to lighten the woman's work, while the men have all the modern machinery and farm-implements which their work requires."

The Department is requested to publish lists of practical and efficient household devices; to explain the general principles involved in them; to educate the farmer to the need and economic advantage of supplying his women folk with such conveniences. In reply to these requests the Report points out that a study of household labour is at present being carried on by the Nutrition Investigations Office of the Department. Experimental data are being collected regarding the lessening of labour, standardisation of methods, and equipment for the processes of cooking, laundry work, cleaning, etc., and the most convenient height for the work table, sink, stove, laundry tubs, ironing board, etc. Attention is also being given to the placing of the equipment of the kitchen, pantry, laundry, and storeroom or cellar so as to secure greater convenience and fewer steps in housework. It is proposed also to study the relative efficiency, convenience, durability, and ease of cleaning of various articles of household equipment, with a view to standardising the same. Information is also being collected as to the efficiency, care and use of labour-saving machinery of special interest to the housekeeper, such as washing machines, vacuum-cleaners, buffing and polishing machines, power knife sharpeners, steam cookers, etc. Information on these matters has been supplied through correspondence and conference, and bulletins are planned as a result of projects now under consideration.

Closely connected with the question of labour-saving devices in the home is the question of securing cheap power for the many purposes to which it can now be put. Many argue that the water power which is now going to waste could be made to generate enough electric power to relieve the housewife of her most laborious and distasteful work; it would run washers and wringers, pump water, operate cream separators and churns, light, heat, and cook.

These ideas are expressed by a number of correspondents from all sections of the Union. We quote the following from a Kansas woman:

"The thing she needs in this day and time is electricity. Then when her house is lighted, her cream separated and churned, her washing, ironing, and sweeping, her sewing machine run by the same power, and she relieved from the drudgery of washing and filling lamps, lifting and washing jars, pans, and all those other old hard things, she can have some time for a social life and the improvement of her mind. The only way I can see is for the Government to furnish, at a reasonable price, electricity to every farm".

(2) *Water supply, Heating, Lighting, and Sanitation.*

No correspondents write with greater emphasis and conviction than those who treat of the problem of water supply. Over and over again it is stated that an adequate water supply in every farm house would be the greatest boon that could be given the rural population. Requests are numerous for authoritative descriptions of plumbing systems that can be installed economically and with home labour, and the hygienic necessity of such improvements is dwelt on at length.

There is also a general feeling that the old-fashioned oil-lamps and wood or coal ranges are antiquated and should be replaced by electric lamps and heaters.

An urgent plea also comes from the American farm-woman for better education on sanitation and hygiene. The proper ventilation of the home, the construction and use of the "septic tank," the removal of manure and the destruction of the house-fly are all matters on which she asks the Department for information.

(3) *Home Economics.*

"We hear so much about 'balanced rations' for farm animals of all kinds, why not apply it to the human race" writes a Michigan woman. And from North Carolina comes the request:

"I want first to understand how to prepare, cook and serve a balanced ration to my family. This may be done by the Government sending us lessons in so simple a language that we young women who have married and are trying to raise a family on less than a common-school education can take it in. I have read some on the subject; the ratios and scientific words I can't take in."

Again from Illinois comes the appeal:

"Those of us who are older and missed the advantages of domestic science would like to know something of a balanced ration for our families. I know something of this but ought to know more, as our children are the most important crop we have."

An Indiana woman certainly looks upon the Department in the light of "guide, philosopher, and friend" when she writes:

"Give us recipes for good wholesome meals to be served three times a day, and such that when an unexpected guest arrives at the last minute he may be invited to dine with us without extra work or embarrassment."

Nor has Uncle Sam been deaf to the request, for the Report states that "for some 20 years past the Department of Agriculture through its Nutrition Investigations, has carried on a study of the value of agricultural products as food in the home. This work has included studies on the nutritive value and digestibility of foods, their preparation for the table, the planning of meals, dietetics in the household in the country and in town, and in institutions, the care of food in the home, the prevention of household wastes, and numerous other related topics"; while the demand for a government cookery book has been met by the publication of a whole series of bulletins on foods and their preparation, including No. 11, "American Foods and Cooking," popularly known as "Uncle Sam's Cook Book."

(4) *Medical Assistance.*

In the important matter of medical attendance and care of the sick it would seem that the American farmer and his family are behind the European. Many writers complain bitterly of the large fees, up to \$ 25, charged by physicians called to the farm, and frankly state that medical and dental attention is beyond the average farmer's reach. It is pointed out that in cases of swine fever or other animal diseases the government helps with advice or sends a specialist to their assistance, but that when human life is concerned the farmers have to take their chances, and face illness and emergency in helpless ignorance.

Many correspondents strongly advocate the provision of rural nurses and medical inspection of country schools as means of preventing and combating disease. At present this need is met only by the American National Red Cross through its town and country nursing service; but this service should be extended and made available throughout the country districts. This opinion is expressed by a number of women. We quote the following:

North Dakota. — "The greatest need in our community, which is situated in prairie country, subjected to terrible blizzards, and with roads almost impassable or no roads at all, is rural nurses. Women on homesteads often die in childbirth, and the life of the little stranger is often lost also, because of no doctor and no nurse. If the department could find a way to have a rural nurse system established it would be the best assistance for the women in this locality ever known, where we sometimes have to go 30 or 40 miles to a doctor, and by saving the lives of the women and children who could estimate the hundreds of thousands of lives saved for the nation?."

In this connection, the International Congress of Farm Women, held at Oklahoma in 1913, passed a resolution asking "that all possible assistance and encouragement be given to rural nursing as inaugurated by the American Red Cross Association."

In the matter of sanitation, the Report points out that the United States Public Health service stands ready to supply expert advice on all matters pertaining to rural sanitation and to furnish a number of publications dealing with the nature, treatment, and prevention of the more serious diseases. The Department of Agriculture urges organisations of women to take up these questions and to become intelligent guides in their communities on matters of public health.

§ 3. THE NEED FOR EDUCATIONAL FACILITIES.

Letters from all over the country dwell on the importance of education in the common schools in agriculture and home economics. Under the present system, many writers say, the school educates the young not for their life-work but away from it. In particular the establishment of agricultural high schools in rural districts is very generally urged. At present the tendency is for those who wish further development to seek it in the cities. Rural high schools, accessible to all country boys and girls, and preparing them for a useful country life, appeal to many as the remedy for this condition. In these schools it is strongly urged that domestic science for girls play an important part. Needlework, cooking, canning, book-keeping, every branch of home management should be taught as thoroughly and as practically as agriculture, and the students of each should be fitted to be self-supporting in much the same way.

A characteristic form of agricultural education which is being developed in the United States is that of agricultural clubs for children. The Department of Agriculture advises women to organise the boys and girls in their rural communities into such clubs, the purpose of which is to teach advanced methods of farming, animal husbandry, and home making in a practical way which yields a monetary profit to the children taking a part in the work. These clubs, in addition, supply certain social features which are very desirable for the young people of country districts, and they aid the children to develop the resources of the farms, to improve the quality of country life, and to become economically independent.

The girls are interested in the canning, gardening, apple, poultry and pig raising clubs; the boys in the clubs for raising corn, potatoes, pigs, apples, peanuts, etc.

In the boys and girls club work, up to and including 1914, there was an enrollment of 250,000 young people, the work among girls being in charge of women county agents and that among boys being directed by the men county agents.

The 4,202 girls who sent in reports put up 1,032,115 cans of tomatoes and 522,147 cans of other products worth \$180,420.05. On two tenth-acre plots two girls produced and sold vegetables to the value of \$243.86, at a profit of \$214.12. This work trains girls to become efficient home-makers, to develop the resources of the farm, to improve the quality of country life, and to become economically independent.

The report also calls attention to the itinerant schools of agriculture and home economics which provide for local classes of ten or more farmers or farm women for the study of some topic of special interest to the community. A special form of such schools has been devised by the Department and is now being tried experimentally in co-operation with the State agricultural colleges.

Among the suggestions on educational lines made by the women we note the proposal that the Department should aid in developing rural circulating libraries; should advise on courses of reading; should make out a course of study dealing with subjects of interest to women in the country; should provide courses of lectures in rural districts; while a number of writers urge the Department to publish a weekly or monthly periodical dealing exclusively with matters of interest to women on the farm.

§ 4. THE ECONOMIC NEEDS OF FARMWOMEN.

Undoubtedly the section of the report which deals with the economic needs of women is the one which gets at the root of most of the troubles complained of, for the farm woman's position as a social, educational and labour unit must necessarily depend on the economic status of the farmer and of the agricultural industry as a whole. Many of the women correspondents show themselves to be fully alive to this fact.

Writers representing 46 States took the position that women's work on the farm is not adequately recognised as an important factor in farm production and farm profit. The home and farm it is claimed are parts of the same business, but the man does not feel that his wife as a co-worker is entitled to some share of the cash secured by their joint efforts. One woman writes in favor of legislation which "would require the husband to divide the whole income with his wife". Another writes: "Make it illegal for a man to make his wife work like a slave to cook for from 2 to 10 regular workmen"; while a Kansas woman voices as follows the grievance of the farmer's wife at official failure to recognise the importance of her share of the work;

"In taking the 1910 census the Census Bureau failed to find a name that would include cook, waitress, dishwasher, dairy maid, seamstress, laundress and baby-tender, and so they assigned 'no occupation' to the farmer's wife".

Several women claim that if the farmer's wife were to have her due share of the joint earnings it would solve her domestic problems as it "would enable her to install up-to-date labor-saving devices of her own liking." Again the demand for better vocational training is linked up by correspondents with the economic question, as they look to education as a means of developing gainful handicrafts and home industries which would give the woman some independent command of money.

(1) The Problem of Credit.

But while many consider the economic question exclusively from the woman's standpoint, others take a broader view of the problem. Many wives write that their husbands are entirely considerate and wish earnestly to lessen the drudgery of their lot, but that they simply cannot make enough money to do more than provide the necessities. This condition they attribute to high interest rates and to the low price the farmer gets for his produce.

Judging from these letters a large number of farmers at the end of the year have to borrow money at high rates of interest and on short term mortgages to provide food for their families and to purchase farm requisites. Many are living a year ahead of their incomes, and the returns from their crops barely suffice to wipe out the indebtedness and meet the interest charges incurred to grow the same.

Not only must the farmers pay from 10 to 12 per cent for money, but in addition they are required to pay a bonus which, some state, brings the rate of interest up to 25 per cent. Therefore the women plead for the establishment of some financial system which will relieve the farmer from this burden and from the vicious credit purchase methods now prevailing. Many urge the Government to lend money directly to the farmer on farm mortgages at 3, 4 or 5 per cent, and on long-term paper, making the loans repayable on the amortisation plan.

The two following quotations are typical of the many letters received on this subject :

North Dakota. — "I would suggest that government should make some arrangement to assist the farmers with cheaper money, say 5 to 6 per cent, instead of what the farmer has to pay now, 8 per cent being the smallest on personal property. When poor people need money very badly the banks have been holding them up for 40 per cent to 25 per cent bonus every six months, and 12 per cent on top of this. In this way expenses get too heavy and really the biggest burden is thrown on the women."

Kansas. — "Bettering the farm woman's condition depends very largely on bettering the farmers' financial condition. In adverse seasons the farmers must pay bankers exorbitant interest, and even then may have to sacrifice or lose his stock or farm. If we farmers could get government money on our occupied improved farms — not to exceed 160 acres — at the same rate the banker gets his money it would enable us to tide over adverse years without paying him 6 to 8 per cent more than he pays, or sacrifice our stock or farm to him... These loans could be made under the supervision of the Department of Agriculture, and in case of default the land would automatically revert back to the Government."

The Report points out, however, that many of these correspondents seem to think that a low rate of interest would, in itself, be a solution of their difficulties. They believe that if only money could be borrowed at 4 or 5 per cent on long time it would be a simple matter to go to the Bank,

obtain cash, and put it to what might be called non-productive improvements. This shows that the American farm woman is not yet educated up to the principle which the Department, through its Bulletins, is trying to impress on the farmer, *i. e.*, that "borrowing is safe and desirable only when the money borrowed is to be used in such a way as to yield a return that will meet principal and interest and give the borrower an actual profit."

(2) *Defective Marketing.*

While the above criticism undoubtedly holds good of several of the replies published in the report, many of the correspondents show that they have a sound grasp of the situation. They complain that lack of proper credit facilities forces the farmer to market his produce in an uneconomic manner. There is a very general feeling on the part of the farm-woman that the producer is not getting his fair share of the prices which the consumer pays. Women particularly complain that they get only 13 cents a dozen for eggs in certain sections, when eggs at the nearest store retail at nearly twice that amount; and similar complaints hold good for the other produce of the farm. A woman in Idaho writes:

"Last year we sold our potatoes for 27 cents a hundred pounds and sack costs 8 cents. Some farmers put a slip of paper in the sack with their address for the consumer to let them know what they pay for the same, and the answer was \$1, \$1.50, and \$2 a hundred pounds."

The following is from a New Mexico correspondent:

"In Laredo, Tex., onions were sold by the growers at 2 cents per pound; the next morning the same onions sold at Austin at 15 cents per pound. Again tomatoes were sold one day at two-thirds of a cent each in Palestine, Tex., and the next morning were sold at Austin at 5 cents each. In each case the producer received 13 per cent. of the selling price, while 87 per cent. was divided among the railroads and middlemen. Potatoes are frequently rotting in the fields and on track while many people would be glad to pay the producer more than he has been receiving for them. At the present time I am paying \$3 per 100 pounds of potatoes, and my father in another State is selling them at 40 cents per bushel and many times less... The Government should establish an effective agency for the study of the problems of marketing and for rational methods of meeting this greatest of all problems."

This call on the Government to assist the farmers devise a better, more economical, and more profitable system of marketing is repeated over and over again by correspondents from all sections of the Union. Help the farmer to help himself by getting a fair price for his produce, or rather by getting his fair share of the price which the consumer is already paying, and all the rest will follow, or as a New York farm housewife writes:

"Bend your energies toward giving us farmers more than 35 cents out of the consumer's dollar, and we can, when we get our just share, do

for ourselves the things needed better, than the Department of Agriculture can do for us. We have too much paternalism in Government now."

CONCLUSION.

After reviewing this wide miscellany of suggestions and requests made by the women who have replied to the Department's inquiry, we may conclude that three main needs emerge from the report :

- (1) a suitable system of rural credits ;
- (2) effective organisation for the economic marketing of farm products;
- (3) increased facilities for vocational training with a special view to relieving the drudgery of household work by the application of standardised methods and labour-saving devices.

The first of these problems has been the subject of anxious study by the government and by Congress for the past two years, and it is expected that legislation on this head will be enacted at the forthcoming session of Congress.

The second problem, that of marketing, has been studied by the Department through its recently organised "Office of Markets". Valuable information has been collected and disseminated through bulletins, and an active movement is now on foot in the States in favor of a national marketing organisation to co-ordinate and centralise all efforts and information on this important subject. A proposal for the appointment by the President of the United States of a National Marketing Commission is now pending in Congress.

With regard to the third need, that for vocational training in household work, the Department can point to a vast mass of information which it is constantly disseminating, and the provisions of the recently enacted Smith-Lever bill may be expected in the course of the next few years to supply still existing wants in this direction.

It would therefore seem that with the rational rural credit system, with the improved marketing methods, and with the highly developed vocational training which the near future seems to hold in store for the American farmer, his wife and business-partner may well look forward confidently to progressive development and prosperity.

FRANCE.

THE PROTECTION OF AGRICULTURE AGAINST WILD ANIMALS AND VERMIN AND EXCESSIVE GAME.

OFFICIAL SOURCE:

CIRCULAIRE DU MINISTRE DE L'AGRICULTURE AUX PRÉFETS, EN DATE DU 14 SEPTEMBRE 1915.
(*The Minister of Agriculture's Circular to the Prefects, of September 14th., 1915.*)

As there was last year no open season for game and the Police Regulations in view of the state of siege allowed only a limited use of guns for the destruction of wild animals and vermin their number has considerably increased, in spite of the steps taken to destroy them.

On account of the continuance of the war, which prevents the game seasons being opened, the situation is becoming aggravated. The multiplication of wild animals and vermin and certain kinds of game has become, in many places, a danger for agriculture and the Government has considered the necessity of measures to remedy the evil.

§ 1. PROVISIONS AGAINST WILD ANIMALS AND VERMIN.

We must first of all review the principal legal provisions in connection with the destruction of noxious animals.

The right of destruction of these animals is in many respects to be distinguished from the right conferred by a game licence. The latter is an attribute to a holding; the right of destruction is a right of personal defence, or of defence of agricultural produce. There are consequently characteristic differences; first of all these rights may be exercised by different persons; then the animals that must be destroyed are not necessarily all of them such as may be defined as game; finally, many means of destruction differ from those authorized for the purposes of sport.

In consequence the exercise of the right of destruction is subject to police regulations differing in many respects from the provisions of the game laws and regulations.

The provisions of the law in regard to the exercise of the right of destruction may be classified in two groups: some measures are left to the personal initiative of those interested acting each on his own land without the intervention of the administrative authorities; others, on the contrary, necessitate such intervention on the ground of public utility and may, consequently, within certain limits, extend to all unenclosed land.

The measures individuals may take are of two kinds:

1. — Right to drive off wild animals. — By an extension of the right of legitimate defence, the landowner or tenant farmer has the right to drive off or destroy at any time, even with firearms and at night, wild animals that are damaging the farm (Sec. 9. of the Law of March 3rd., 1844). This right, which in ordinary times is not regulated in any way, is mentioned in all the prefects' decrees regulating the application of the game laws.

2. — Right of landowners, occupiers or tenants to destroy animals classed as mischievous or injurious in the Decrees issued by the Prefects, after consultation with the general councils in accordance with Section 9 of the Law of 1844 authorizing the prefects to regulate this right. Authorizations to individuals granted by prefects in virtue of these Decrees may nevertheless be used to sanction collective destruction by means of battues.

The measures the administration may take may be classed under three heads:

(a) Administrative *battues*, ordered by the prefects for the destruction, in the public interest, of wild boars, wolves, foxes and badgers.

These battues, which may be ordered for any time and on any property, are generally directed by the lieutenant of the wolf hunt, under the supervision of the forestry agents. In case he is prevented, the prefect may, in the Decree ordering the battue, arrange for his temporary substitution by the mayor or the gendarmerie of the district threatened by the presence of the dangerous animals, stating his special reasons for so doing (Circular of the Minister of the Interior of December 7th., 1875).

(b) Special permits granted by the prefects to destroy wild boars, wolves, foxes and badgers, under supervision of the forestry officers, to persons who have gangs or other means for effecting such destruction.

(c) Municipal battues organized by the mayors, who can, in virtue of Section 90, paragraph 9 of the Municipal law of April 5th., 1884.

1st. Take, together with the landowners or holders of game licences, all the necessary measures for the destruction of vermin classed as such in the permanent regulations issued by the prefect.

2nd. In time of snow arrange for the destruction of wolves and wild boars in their district, in default of the holders of game licences, after these have been duly invited, and to call on the inhabitants to proceed with the proper arms and dogs in chase of these animals.

The application of these various provisions gives rise in practice to the following observations of general character affecting naturally each of the classes of measures mentioned above.

Personal Measures. — Being forbidden, owing to the state of siege, to go out armed, landowners, occupiers or tenant farmers cannot use their

guns, either for driving off or destroying wild animals, as permitted by the law, or for destroying vermin, even when the Prefects' decrees regulating such destruction allow the use of fire arms. They have the right to use any other means than a gun against wild animals and the means authorized by the Prefects' decrees, except again fire arms, against wild animals and vermin.

It is for the prefects of the departments for which the regulations now in force do not make sufficiently efficacious provision, in view of the damage done by certain kinds of vermin, to amend their decrees, so as to permit of the adoption of more energetic measures, for example, against rabbits, rabbit nets and ferrets, traps and, if necessary, dogs. In no case are snares authorized.

If the importance of the damage justifies the use of guns either to drive off wild animals, or to destroy certain kinds of vermin, the prefects of the departments situated outside the fighting lines may authorize their use in virtue of powers conferred to this effect by the Minister of war on the generals in command in the different regions and now on the prefects. Further instructions will be given for the use of guns within the fighting lines.

In 1914, the Minister of War laid it down that as far as possible the use of guns should only be allowed on certain days, so as to facilitate supervision by the gendarmes and forestry officers. To render this supervision more effectual and prevent poaching, the Minister recommends that it be specified in the licences granted to individuals that the destructions cannot be carried on except collectively in battues with beaters or dogs, the holder of the permit being allowed the company of a number of men armed with guns varying according to the area of the land to be protected against the animals. The names of these men may appear on the permit or may be left to the choice of the holder of the permit. In the latter case, it may be stipulated that the names of the men taking part in each battue must be sent beforehand to the mayor or the gendarmes in each case.

These authorizations are given, as a rule, to landowners, occupiers or tenant farmers to enable them to exercise their legal right of destroying vermin. However possessors of hunting and shooting rights have always been considered as capable of benefiting by these authorizations and the decrees regulating such rights specially contemplate them. Besides, it is advisable to allow them to destroy animals injurious to agriculture, so as to alter their legal position in respect to liability for damage done as little as possible. The prefects are free to fix the conditions under which these authorisations shall be granted. Thus they can make the possession of a game licence compulsory, as provided in their decrees on the subject, even for close seasons. The Minister considers it will be in the interests of the State and communes to insist on the possession of a licence in the case of the holders of hunting and shooting rights in the department where such a step would not interfere with the destructions recognised as necessary. On the contrary, on landowners, occupiers or tenant farmers

exercising a legal right, no measure of a fiscal character, such as the obligation of possessing a licence, may be imposed.

No individual authorization can be granted except to landowners, occupiers or tenant farmers or their representatives and the holders of licences and their officers.

To facilitate inspection and supervision, the days for destruction (one, two or three a week), are fixed by the decree giving authorization. They must be the same for all the communes of each canton or each arrondissement or even each department, if there is no special reason for more frequent destructions in some places than in others. Exceptions may, however, be made, when recognised necessary, for the destruction of wild boars.

Administrative Measures. — The decrees in regard to administrative battues must mention the territory of the communes where they are to be organized, the number to be held, the kind of animals to be destroyed and the means of destruction authorized (battues with beaters, dogs, etc.). The indication of the names of the persons appointed to carry out the decree is not indispensable; it is enough to indicate their office (lieutenant of the wolf hunt or his substitute: mayor, sergeant of police). It is left to these agents to fix the number of huntsmen or beaters and the days and hours; it has in fact been found that battues ordered for days fixed by prefects have often been unsuccessful, as the animals to be destroyed, particularly the wild boars, which are migratory, have left the district before the day appointed. The Minister suggests that the Prefect's Decree shall confine itself to fixing the term (for example, a month) during which the battues ordered must be held.

The same remarks apply in the case of municipal battues, in regard to which special instructions were issued to the prefects in circular N° 526 of the Minister of the Interior, dated December 4th., 1884.

In view of the state of siege, the mayor must first obtain the prefect's authority before sanctioning the use of firearms.

Of course, in the case of battues ordered by the administrative authorities, the possession of game licences cannot be required of the huntsmen, who must simply be chosen by the organizers of the battue among persons of respectability.

It is recommended that the special permits contemplated for destruction of wild boars, wolves, foxes and badgers be only granted in places where the holders of game licences have neglected to undertake their destruction, in spite of the complaints of the farmers and where the wooded areas are not large enough to justify the organisation of a battue by the administrative authorities.

Transport, hawking and sale. — The animals destroyed by administrative order, or in virtue either of the right of defence against wild animals, or of individual authorizations to landowners or holders of licences, are the property of those who have killed them, in accordance with the general principle that game and wild animals are *res nullius* and belong to the first finder.

However the hawking and sale of these animals is forbidden, unless a provision to the contrary effect be contained in the regulating decrees, as generally in the case of rabbits, wild boars, stags and hinds. In fact, except in a few departments of the South East where provision has not yet been made, the transport and sale of wild boars and rabbits belonging to rabbit warrens, when killed is always free over the whole territory. Provision has also been made in many decrees of the prefects, in departments where stags and hinds are classed as noxious animals, that these animals when killed in accordance with the regulations may be transported and sold, on presentation of a certificate of their origin, delivered by the mayor (or the forestry service when the animal has been destroyed in a State forest).

Transport facilities make it possible to send the animals killed to hospitals, ambulances or charitable institutions and, in some departments where such facilities do not exist, the prefects must grant permission for the necessary transport. Despatch to hospitals cannot always be insisted on; for, besides the fact that the destroyers have a right to the animals killed by them, it is advisable to allow them to make their profit out of them. If, in fact, it is considered indispensable to encourage the destruction of certain animals, it is wise not to hinder this destruction indirectly. It is besides advisable, in the case of the lessees of hunting and shooting rights, to disturb them as little as possible in the exercise of the rights they possess by their contract, so as not to alter their legal position in respect to the lessors.

§ 2. DAMAGE CAUSED BY GAME PROPERLY SO CALLED.

In addition to wild animals and vermin it has been reported that pheasants and hares have in certain places caused considerable damage and the Government has considered it necessary to take steps to hinder their multiplication.

1st. *Pheasants*. — In contrast with other kinds of game, in France the pheasant is essentially preserved game.

Both in view of this special character and the facilitations provided in Section 9 of the Law of May 2nd., 1844, to favour restocking with birds, the prefects have been able to authorize retaking pheasants and putting them in coops either for breeding purposes or, where they are plentiful, with the object of releasing them again in districts where it is desirable to introduce them. On the other hand, on account of the season remaining closed, far too many cock birds have survived for breeding under favourable conditions. It has therefore been decided to grant authorizations for catching the pheasants and putting them in coops between September 15th. and December 31st., and to encourage in every possible way the transport of live pheasants into regions where the breeding of these birds may be undertaken by societies or individuals. But as it is certain that

by reason of the superabundance of pheasants the quantity of birds to be caught, especially cock pheasants, will exceed the needs of the breeders, the transport of pheasants to preserved meat factories has been authorized under the conditions already approved last year which we give below.

Hawking and sale of pheasants is forbidden, so as not to encourage poaching; it is only permitted to transport them to the railway station nearest the breeding establishment and thence in trucks or sealed baskets, in consignments of not less than 100 kilograms each, to tinned meat factories.

On the other hand pheasants may only be caught at the distance of at least 150 metres from the nearest game preserves and permits to capture them can only be given to persons of perfect respectability after it has been found on enquiry that they devote themselves to the raising of pheasants.

In case the persons applying for permission desire to offer the pheasants to hospitals or charitable institutions their applications may be granted, but each consignment must be accompanied by a special permit declaring:

- (1) the origin of the pheasants (landed estate on which and locality in which they were caught);
- (2) the number of pheasants of which transport is authorized;
- (3) the institution to which they are forwarded.

These permits must be returned to the prefect immediately the pheasants have been received, with the visa of the manager of the institution.

Authorizations for the transfer of live pheasants for breeding purposes are given, as in the past, by the prefect of the department concerned when they are transported from one place to another within the limits of the department or directly by the Minister of Agriculture (General Division of Waters and Forests) when they are to be transported beyond the department in which they have been caught.

2nd. *Hares*. — The prohibition of hunting and shooting during the season 1914-1915, has permitted hares to multiply and in certain communes serious damage is reported as having been caused by these animals. In places where the seriousness of the damage has been verified on enquiry it has been decided to authorize the capture of hares by means of snares, in order to send them to districts where preserves may be restocked with hares. These authorizations are granted under the same conditions as in the case of pheasants.

GREAT BRITAIN AND IRELAND.

PERIODIC MIGRATIONS OF IRISH AGRICULTURAL LABOURERS.

By JOHN HOOPER, B. A.,

of the Department of Agriculture and Technical Instruction for Ireland.

Ireland, one of the most fertile lands in Europe, a purely agricultural country with but few important industries, having as its political partner the densely populated industrial island of Great Britain with its large markets for agricultural produce, might naturally be expected, for economic and political reasons, to possess a highly intensive system of agriculture calling upon its poorer and later districts and on Great Britain for migrants to gather an abundant harvest. Ireland, however, all but lost the art of tillage, the migrations of agricultural labourers from one district in Ireland to another, at one time considerable, have now dwindled to insignificance and instead of drawing on the British labour market at harvest time, Ireland loses at this her busiest season the services of many thousand small farmers, their sons and daughters, who are obliged to eke out their livelihood with savings made at harvest work in Great Britain, which keeps them more than half the year absent from their homes. One might expect to find these homes on the neighbouring eastern coast but they are only to be found in the extreme western and north western counties, three hundred miles distant from Great Britain. These migrations present one of Ireland's many anomalies, which can be explained only by reference to her history, and perhaps it may be of interest before describing the present migrations to trace even in some detail the causes which have occasioned them. They have been necessitated by poverty, the result partly of natural, but largely of historical causes.

§ 1. PRESENT CAUSES OF THE MIGRATIONS.

Most of the migrants come from Co. Mayo on the western and Co. Donegal on the north-western coast. Barren mountain, lake and bog, cover more than half of the area of these two counties; the remainder is cultivable land of poor quality and even this is not made the most of

The best of it is divided into large grazing ranches employing but little labour; the rest is highly congested. More than half of the occupiers still hold less than one fifth of the cultivable land and this the worst land is often found subdivided into a patchwork of small holdings consisting of numerous detached little plots sometimes a dozen to the acre. The agricultural methods are still primitive and as the migrants after sowing their little holdings have to hurry to Great Britain, their crops can only be inefficiently cared for by the weaker members of the family who remain at home. The mineral resources of the country are insignificant and fishing is rendered dangerous and difficult by the Atlantic gales and the lack of landing facilities. The subsidiary industries — fish curing, kelp burning, weaving, knitting, crochet and lace making, etc. — have done little as yet to alleviate the poverty. Nature places many obstacles to the marketing of produce. Transit facilities are poor and railway rates high and accordingly there is little inducement to trade with distant markets. Local markets are wretched; the districts produce nothing to exchange against agricultural produce and in these two counties with a total population of 360,000 persons the largest town (Ballina) has only 4,700 inhabitants.

§ 2. HISTORICAL CAUSES OF THE MIGRATIONS.

Annual migrations of Irish harvestmen to Great Britain have taken place for at least two centuries and were important enough to attract the attention of English and Irish writers early in the eighteenth century. The historical forces compelling and attracting the migrations had probably reached their maximum about 1847 and it will be convenient to consider them up to and after this year.

(a) *Migrations increased up to 1847.*

During the Conquest of Ireland, which was not complete until the middle of the 17th century, large numbers of the Irish retreated westward before the conquerors, increasing the population of the west at the expense of the east. Two measures in particular affected the Provinces of Ulster and Connaught from which the migrants have always come. The Plantation of Ulster under James I. drove many Irish to the mountains of Donegal and the Cromwellian Settlement banished one-eighth of the Irish families to the Province of Connaught. The resulting overcrowding was afterwards intensified by a high marriage rate amongst a naturally fertile and long-lived people. Early marriages were encouraged by a system of land tenure which placed no obstacle to the subdivision of holdings and by a franchise which made it the political interest of the landlords to have a numerous tenantry. Accordingly in the Report of the Irish Census

Commissioners we find that in 1841 there were 476 persons in Mayo and 473 in Donegal respectively to the square mile of cultivable land as compared with 335 for the whole of Ireland. In 1911 the figures had declined to 193 in Mayo, 203 in Donegal, and 191 in Ireland as a whole.

The overcrowded population was unable to take full advantage of even the poor resources of their country. The banishment of the Irish from the towns and the restrictions placed on Irish industries and commerce in the 17th. and 18th. centuries stifled the spirit of industrial and commercial enterprise. The only resource left was agriculture, but the lands did not belong to the occupiers, who rented them under a wretched tenure. Owing to the high and extortionate rents and subdivision was carried to extremes; holdings became uneconomic and accordingly, with no local industries or trade to fall back on, the people were forced to resort either to emigration or to periodic migrations.

The large areas cropped up to the middle of the 19th. century in Great Britain and in the south eastern quarter of Ireland required considerable extra labour at harvest time and attracted the labourers from the late harvest lands of the mountainous north western quarter of Ireland. This extra labour in Great Britain was at one time supplied largely by agricultural labourers from the Highlands of Scotland and from Wales and by local own labourers, but the Irish migrants supplanted the British migrants and with the improved travelling facilities of the early half of the 19th. century crossed to Great Britain in increasing numbers up to the middle of the century when perhaps about twice as many went to Great Britain as went to the south eastern quarter of Ireland.

(b) *Migrations have decreased since 1847.*

The potato was practically the only food of the Irish migratory class and the potato famine in Ireland in 1847 swept so many families away by starvation that this calamity is comparable in its effects with the Black Death in England. Other causes quickly followed further to reduce the population of Ireland, which decreased from its maximum, 8,200,000, in 1841 to 4,400,000 in 1911. The fall in the price of corn after the Repeal of the Corn Laws and the rise in the price of meat induced landowners to consolidate their farms and turn them into grazing ranches. Evictions were wholesale and the dispossessed tenants who had the means fled in hundreds of thousands annually to America. An idea of the effect of the famine and emigration may be obtained from the Census figures for Co. Mayo which show that the population which had increased by 33 % in the twenty years preceding 1841 decreased by 34 % in the following twenty years. The numbers of the migratory class, however, were not reduced in the same proportion as the status of the population was lowered. Many of the evicted tenants fled to the mud cabins of the migrants who were swept away by the famine and took their places at

the British harvests. The migrations to the south east of Ireland fell away rapidly with the decrease in tillage, but there was still plenty of harvest work to be had in Great Britain (though the cropped area there also decreased) and the numbers crossing did not greatly decline until the beginning of this century.

The numbers of migrants to Great Britain in 1841 were estimated by Census Commissioners at 40,000; probably another 20,000 went to Leinster and Munster making 60,000 in all. In 1900 the number that migrated was estimated at 32,000, practically all of whom went to Great Britain. This decrease was due principally to the decrease in the numbers of the migratory class in Ireland and to the decrease in the cropped areas of Ireland and Great Britain. The number decreased from about 32,000 in 1900 to some 13,000 in 1914. The decline has been caused partly by the more general use of improved farm machinery, especially the self-binder, in Great Britain, and by the continued emigration to America from Mayo and Donegal, but it is more largely due to improved conditions in Ireland itself. These improved conditions have been brought about to some extent by increased prices for agricultural produce but mainly by Government action. It is only now that the ameliorative legislative measures, especially the Land Acts, initiated by Gladstone and improved upon and supplemented by succeeding Tory and Liberal Ministers, are having their full effects. In particular, the improved conditions have more recently been brought about by the Land Purchase Act of 1903 and by the combined work of the Congested Districts Board founded in 1890 and the Department of Agriculture and Technical Instruction established in 1900. The land is gradually being redistributed in more or less economic holdings amongst the people who have purchased it on the instalment principle with money lent by the Government. They are being taught to get the most out of the land by up to date methods of agriculture, and the best return from the sea by the best methods of fishing in the most suitable boats; they are taught to build the boats and make and mend the nets themselves; the women are instructed in the curing of fish, in weaving, knitting, crochet and lace making, in order to supplement the earnings of the men, and are also taught the most suitable system of housekeeping so as to make the most of their little incomes. Money is lent by the Government for productive expenditure but this is scrupulously paid back by these poor people; State pensions are given to the aged poor and these are of exceptional importance to the migratory class, who, owing to emigration, include an abnormally high percentage of old persons; labourers' cottages have been built at public expense and rented with acre or half acre plots at a nominal rent; railways have been built with public guarantees; seed potatoes have occasionally to be doled out at times of dearth and relief works undertaken. While all this is being done the greatest care is taken that no Government action shall undermine the spirit of independence, which, on the contrary, is carefully fostered and stimulated. For the uplifting of the people the Government mainly depends

on educational methods and teaches the people to rely on themselves (1). The types of State aid referred to apply with particular intensity to the districts and classes from which the migrants come. These districts and classes also share in the general improvement brought about by other Government measures and by voluntary agencies, such as the agricultural co-operative movement and the Gaelic League.

§ 3. RECORDS AND DESCRIPTIONS OF MIGRATIONS.

The first authoritative numerical estimate of the migrations to Great Britain was that of the Census Commissioners of 1841. The famine of 1847 was the occasion for starting an admirable system of collecting annual statistics of areas and produce of crops and numbers of live-stock in Ireland by police enumerators, who, after the distress of 1879-80 amongst small farmers and agricultural labourers — the class from which the migrants are drawn — were instructed to include in their statistical returns for 1880 particulars of the migrations of agricultural labourers and this has been done each year since. Each enumerator in June makes a return, for the area allotted to him, of the names, addresses and occupations of all persons who have migrated or intend to migrate that year. Although this Census is far from complete, supplementary railway and portal returns showing that not more than about 60 % of the migrants are enumerated, still the police returns disclose much interesting information. Seventy-four per cent of the migrants enumerated in 1914 came from Connaught, 24 % from Ulster, the remaining 2 % coming from Leinster and Munster; Co. Mayo in Connaught alone furnished 58 %, Co. Donegal in Ulster 22 %. Only 3 % of the migrants were females, nearly all of whom went from Achill Island to Scotland to gather the early and late potatoes. Of the migrants enumerated 18 % were small farmers, 69 % the sons and daughters of small farmers, the remaining 13 % being landless agricultural labourers. Seventy-seven per cent of the farmers who migrated in 1914 had holdings less than 15 acres, 87 % had holdings less than 20 acres; the large holdings belonging to the migrants, some up to 40 acres and even more, are mostly barren or rough grazed mountain land. Ninety-six per cent of the migrants went to Great Britain, only 4 % finding employment in Ireland on farms at a distance from their homes. Of the

(1) For fuller accounts of the economic conditions of Irish agriculture and the action taken by the Government to improve them, see the following articles in the *Bulletin of Economic and Social Intelligence*:

"Land Purchase in Ireland", October 1911.

"The Fair Rent Provisions of the Irish Land Acts", by A. P. Magill, January 1914.

"The Sources of Rural Credit in Ireland", February 1915.

"The Congested Districts of Ireland and the Work of the Congested Districts Board",

by F. S. Sheridan, February 1915.

migrants who went to Great Britain 72 % went to England, 28 % to Scotland. Of those who went to England 99 % were from Connaught (78 % coming from Mayo). Of those going to Scotland 80 % were from Donegal and 16 % from Mayo.

Although the number of migrants enumerated in 1914 was only about 60 % of the number who actually migrated still even the number enumerated show that the migrations cause an appreciable drain on the labour supply of many districts. In 1914 in the Poor Law Union of Swinford, Co. Mayo, a district of 237 square miles with a total population of 43,000, no less than 24 % of the total male population 20 to 60 years of age were enumerated as migrants; in Glenties, Co. Donegal, 14 % were enumerated; in Dunfanaghy, Co. Donegal, 12 %; in Westport, Co. Mayo, 10 %; in Claremorris, Co. Mayo, 9 %, etc.

§ 4. THE MIGRANTS IN GREAT BRITAIN.

In Great Britain the migrants are classed into three groups: (1) The "Achill workers," (2) The "Donegal men," (3) The "Connaught men." The first two groups work in Scotland, the "Connaught men" in England. The "Achill workers" are the most highly organised and most interesting but the least numerous of the three groups. This is the only group that contains many women and girls and the males, unlike the "Donegal men" and "Connaught men," are usually old men or boys. Girls and boys of twelve years and even as young as nine years are found working in this group. The "Achill workers" are employed only at potato lifting; the "Donegal men" and the "Connaught men" do all classes of harvest work including potato lifting. The "Connaught men" make up the largest of the three groups and appear to earn per head per week more than the "Donegal men", who earn considerably more than the "Achill workers." As the latter in addition do not remain so long away from their homes as the "Donegal men" or the "Connaught men" quite as long as the "Connaught men" the amount of savings per head of the "Connaught men" for the season is perhaps double that for the Achill group.

The following paragraphs indicate the conditions under which the migrants work in Great Britain; the average wages and savings mentioned refer to the year 1914, but it is understood that the corresponding figures for 1915 are considerably higher.

(a) *The "Achill Workers."*

The "Achill workers" come principally from the Island of Achill and the neighbouring mainland of Connaught and go in squads to Scotland, each squad being under the charge of an Irish "gaffer" who has made arrangements early in the year for work for his squad for the whole season

from June to November with potato merchants in Scotland. These merchants buy potatoes in the field from farmers in different localities; the potatoes are lifted and gathered by the "Achill workers," who after doing two or three weeks' work on one farm pass on, as by previous arrangement, to the next farm and accordingly do not suffer from unemployment during their stay in Scotland. The members of each squad remain together for the whole season and it is their excellent organisation which makes it possible for the pure Irish girls and women to work in this group as migrants alongside their fathers, brothers and neighbours, and it is the lack of organisation in the other two groups of migrants that accounts for the very few females they include. The "Achill workers" go about the middle of June to Glasgow by a special steamer which calls for them once a year at Achill or by the regular steamship service from Westport. The distance by sea is about 300 miles and only the roughest accommodation is provided for the migrants, who are charged only 7s. for the journey. On arriving at Glasgow they are set to work lifting the early potatoes in Ayrshire. These are dug by a man with a fork and picked by a woman, the two being called a "graip." A squad is usually made up of a dozen "graips," two "timmers," a "barrelman" and a "riddler." The work is very hard on the girls and women, who have to keep pace with the men dragging themselves and their heavy baskets of potatoes often through sodden clay. When a basket is filled the woman passes it to one of the "timmers," who takes it to the collecting point where the "barrelman" and "riddler" collect and sort the potatoes in barrels for the market. Six graips will lift an acre of potatoes in the day and a graip usually earn about 5s. a day between them. A "timmer" usually gets 3s. a day, the "barrelman" and the "riddler" about 25s. a week, the "gaffer" 26s. to 30s. The graips and timmers are paid only for the time actually worked and one day a week is said to be the average time lost on account of wet weather. The others are paid the same, wet or fine. The working day is ten hours, beginning at 6 or 6.30 with a breathing spell of ten minutes at about 9 o'clock, a half hour for dinner at mid-day and another ten minutes' rest in the afternoon. The workers, however, are always only too glad to work earlier or later if required and sometimes commence as early as 3 a. m. The early potato season is over in Ayrshire in mid-August when the squads move into many of the Scotch counties, but principally to the eastern counties, to gather the main potato crop, which is raised by potato digging machines; the women and girls pick the potatoes, which are pitted by the men. This work is finished early in November when the "Achill workers" return home.

On arrival in Glasgow in June each of the squad is supplied by the merchant with pair of double blankets as bed clothes, which are carried from farm to farm and returned when the work is finished. The merchants also contract with the farmers for sleeping accommodation for the squads, but as the farmers have no financial interest in their welfare and as the one squad remains on a farm for only a few weeks the accommodation provided is wretched, but is improving. The migrants sleep in "bothies" which

are sometimes cottages but more often only farm buildings—barns, sprouting sheds, etc. They frequently have to eat and sleep in the same compartment and as the one fire which is supplied by the farmer is often out of doors the migrants in wet weather are sometimes unable to get their clothes dried for work on the following day. They usually sleep on straw, which they find more wholesome than the mattresses which are sometimes provided by the farmers. The merchant allows them all the potatoes they can eat, but as a rule they can only find time to boil the potatoes for the evening meal after their day's work is done. The workers stint themselves to save as much as possible and live on potatoes, bread and butter with occasionally eggs, fish, bacon, and tinned meats, but very seldom fresh meat. It costs a single individual 7s. or 8s. a week to keep himself, but as many of the workers come in families of three or four the average cost is less. For the season from mid-June to the end of October eight pounds is considered a fair saving for one person.

(b) *The "Donegal Men."*

The "Donegal men" come from Ulster, principally from Co. Donegal, and work in Scotland as general harvesters. Unlike the Achill labourers they work individually, each making his own arrangements by writing early in the year to the farmer or farmers who employed him in the previous season. A labourer migrating for the first time generally goes in company with an older hand who looks after him. They usually migrate early in June and start work at turnip singling, and many remain until a few weeks before Christmas. They generally go by train to Derry and thence by steamer to Glasgow and are employed chiefly in the Lothians (Linlithgow, Edinburgh and Haddingtonshire) and Berwickshire. At certain times during the season the farmers are pressed for labourers—at first and second hoeing, hay making, corn harvesting, potato digging, mangel and turnip gathering—and though many of the Donegal men remain on the same farm throughout the whole season, others pass from one district to another, sometimes from an early district to the same operation in a late district, sometimes from an early operation in one district to a different but later piece of work in another, endeavouring to obtain the hardest and best paid work which is to be obtained at the periods of emergency. Between spells of pressure they can earn but small wages and sometimes put in these intervals as navvies.

The usual working day of the "Donegal men" is 10 hours—from 6 to 6 with a two hours' interval—but when working by the piece they often put in 14 hours a day. At turnip singling and hoeing, potato pitting and mangel and turnip pulling they are generally paid by the piece, and 5s. a day is considered a fair earning. At harvest time they are paid by the week, getting about 21s. to 25s. with beer and bread and cheese once a day. Some farmers give tea, coffee, milk or money—about 3s. a week—instead of beer. They generally get free lodging on the farms in "both-

ies", much the same class of accommodation as is provided for the Achill workers. They are usually allowed potatoes and have to do their own cooking. It costs one of them about 10s. a week to keep himself in tea and bread and butter with fish, bacon, eggs and fresh meat. A thrifty man saves up to £15 during his six months stay. They bring home considerably more than the "Achill workers," who are chiefly women and girls, old men and boys, and the "Donegal men" remain longer in Scotland.

(c) *The "Connaught Men."*

The "Connaught men" come from the Province of Connaught, chiefly from Co. Mayo, and work as general harvesters in England. Like the "Donegal men," they make their arrangements early in the year individually with the farmers with whom they were employed during the previous season. They begin to migrate as early as February and many remain until a week or two before Christmas. They go by train to Dublin—a distance of nearly 200 miles—and thence by steamer to Holyhead—a sea journey of 70 miles. They are principally employed in the northern half of England—in Northumberland (Donegal men work in the northern part of the County, Mayo men in the south), Durham, Yorkshire, Lincolnshire, North Cambridgeshire, North Huntingdonshire, Warwickshire, Staffordshire, Derbyshire, Lancashire and Cheshire.

Some of the "Connaught men" remain on the same farm during their whole time in England but most of them, owing to the nature of the work, are employed in at least two or three different districts in which the same men, year after year and one generation after another, work on the same farms. Their best paying itinerary appears to be to work at haymaking in East Lancashire and West Yorkshire, then at the corn harvest in South Lancashire and North Cambridgeshire and then at potato lifting in Warwickshire and Staffordshire. For the "hay month" in East Lancashire and West Yorkshire they usually get £5 10s. with their food and lodgings. In the Fens of North Lincolnshire and North Cambridgeshire, where it is often impossible to use the reaping and binding machines they are employed in harvesting the corn. They work in groups of three or four and for a long day's work they earn 7s. to 10s. each. In North Warwickshire and South Staffordshire where the best wages are to be had, they make also from 7s. to 10s. a day lifting potatoes and make £10 to £12 in the five or six weeks they are employed in these districts. Between these three seasons they earn but low wages and have to chance a certain amount of unemployment.

Many "Connaught men" remain from June and some even from February up to a week or two before Christmas on the same farms in Southern Lancashire, Durham, Lincolnshire, Warwickshire, and Cheshire, but though they suffer no unemployment they are paid comparatively low wages. They get 16s. or 17s. a week with 10s. to 20s. extra for the corn harvest. On piece work at potato lifting they make up to 6s. a day.

As a rule the "Connaught men" are given barns, lofts or sheds, in which to sleep, with straw and blankets or sacking for bedding. On many estates in Southern Lancashire and Cheshire special cottages of two rooms have been built for them. The men are generally given fires for cooking and where these are not supplied the little cooking they require is done for them by the house servants. Sometimes they pay 1s. or 2s. each to a woman, usually the foreman's wife, to cook for them. Their food costs about 10s. or 11s. a week but at times of particularly hard work they spend more. It is difficult to get an idea of their savings. Perhaps on an average they would save £15 or £16 during the season. Some who are lucky enough to get continuous work at periods of pressure, say at haymaking, then without a break at corn harvesting, and again without an interval at potato lifting, can save as much as £30 in the season, but others may have some weeks of enforced unemployment between the haymaking and the corn harvesting and between the latter and the potato lifting. The men who stay on in one place lose no time except in wet weather but cannot save more than about 10s. a week, whereas a man at piece work, at corn harvest, or potato lifting can save 20s. a week or more while the work lasts.

Their English and Scotch employers bear testimony to the endurance, industry, thrift, sobriety and general good conduct of the Irish labourers and state that as a class they are far superior in every way to the local labourers who can be engaged for the same work. The decline in the number of Irish migratory labourers presents a serious problem to the British farmer; to the Irishman, however, the decline is only one of many indications that his country, plunged for centuries in poverty and unhappiness, is at last emerging into prosperity and contentment.

NOTICES OF SOME RECENT PUBLICATIONS
RELATING TO AGRICULTURAL ECONOMY IN GENERAL.

FRANCE.

BAUDOIN (R) : LE RAVITAILLEMENT EN VIANDE DANS L'ARMÉE FRANÇAISE (*Supply of Meat for the French Army*). *La Vie Agricole et Rurale*, april 10th., 1915.

The fresh meat which the Commissariat distributes to the army in the field is obtained, if possible, from the local supply furnished by the territories occupied by the troops. But when it is not possible to live on the country, as in the present case, it is necessary to obtain consignments from the country in the rear. Among the organizations in the rear the army has at its disposal are the stores (*Stations-Magasins*), which Mons. R. Baudoin has studied in the *Vie Agricole et Rurale*, of April 10th., 1915.

The store is a centre of supply established on a railway behind the armies in the field. It is a large establishment, at the same time a factory and a storehouse, the essential rôle of which is to keep available, at a certain distance from the scene of hostilities, provisions of every sort required by the troops — bread, biscuits, fresh or tinned meat, fresh or preserved vegetables, rice, salt, sugar, roasted coffee, wine, etc.

With regard to fresh meat, which alone is studied by M. Baudoin, every store is supplied with livestock as follows :

1. In proximity with the store there is formed a livestock *depôt* to provide a supply of livestock for two days for the troops served by the store (the requirements are calculated on the basis of a 500 gram ration, and assuming a uniform yield of 50 %);

2. Near one of the railway stations further back a supply equal in amount with that of the *depôt* (two days' supply of livestock) is maintained at a cattle collecting station (*parc de groupement de bétail*).

In order to prevent crowding, the supply in the *depôt* and at the collecting station must never be more than enough for two days for the troops served by the store. Also, with the same object, the *depôt* and the collecting station are divided each into two parts, each containing half the stock of animals, the first half housed or penned in the neighbourhood of the station, so as to be placed on the train at a moment's notice, the second half at some distance from the station, at 3 or 4 kilometers at most. In each division the animals are housed in cow-sheds, stables, cart-sheds, etc., or, in the absence of covered enclosures, they are kept in the fields.

In the department or region in which the store is situated, a certain number of cantons are selected beforehand to furnish the livestock required for the supply of the dépôts and collecting stations. These cantons form part of areas selected in advance, which, as a rule, may not extend to a greater distance than 50 or 60 kms. from the dépôt or the collecting station. These areas are exploited by the territorial supply service, which is entrusted with the task of supplying the cattle required for the collecting stations and the stores. Preparations were already made for this in time of peace so as to ensure the supply of livestock for the stores from the first day of mobilisation.

The livestock required for the store is, in the first place, supplied from an area reserved for the purpose in the immediate neighbourhood. When the resources of that area are exhausted, or, before this, when circumstances make it necessary, the livestock required are obtained from areas further in the rear, along the line of communication which serves the store; in each of these areas provision is made for a cattle collecting station.

Each area is divided into collecting districts (*circonscriptions de groupement*), each of which has a receiving station, situated as near as possible to the dépôt or collecting station it has to supply, so as to prevent unnecessary journeys for the cattle. The livestock is collected in these receiving stations by one or more receiving commissions: the livestock supplied by each commune is taken in droves to the receiving station and thence by road or rail to the dépôt or the collecting station. The area which assures the replenishing of each dépôt or collecting station also assures the feeding of the livestock; the receiving commissions have also to collect the fodder and send it to its destination.

The livestock delivered by the receiving commissions is received at the second division of the dépôt or the collecting station by the administrative officer in charge; after examination by the veterinary surgeon, they are penned and weighed and then placed in stables, on farms or in enclosures.

The store must be always in a position to satisfy without delay the applications for livestock it receives from the Commissariat. It is the Commissariat who are really concerned with the supply of livestock to the army.

The livestock applied for is not slaughtered at the store; it is forwarded alive by rail to the concentration station (*gare régulatrice*), where it is consigned to the food supply division of the Commissariat office of the station.

The livestock despatched by the store is taken from the first division of its dépôt, situated, as we have seen, quite in the proximity of the forwarding station. This precaution prevents all loss of time; so the loading rapidly follows the order to deliver. Each truck is loaded with eight or ten animals, according to size; twenty minutes suffice for loading a truck. Each train must carry enough cattle food to assure the feeding of the cattle when unloaded. But the livestock do not require food or drink when the journey does not take more than thirty-six hours and is not made in hot weather; if the transport requires a longer time, the

livestock are unloaded at a station arranged for the purpose of giving them food and drink; in hot weather they are given water every twenty-four hours.

It is desirable, as the war is being prolonged, to economise the supply of cattle in the country and to have recourse to pig-meat, as far as may be. The pigs may be slaughtered in the dépôt, so that they may be forwarded to the troops as soon as they have been slightly salted. If the despatch of fresh meat is impossible, the store sends the troops preserved meat, a supply of which formed in time of peace in each store is kept up by means of consignments from the interior of the country.

The trucks of cattle, on arriving at the concentration station, are sent from there to the Commissariat bases, where the animals are unloaded and taken under the care of the food supply division of the Commissariat, which makes up droves to travel by land to the cattle pens of the various army corps. In fact each army corps has a cattle pen which can supply the whole corps with meat for two days. When no distributing routes have been established, a pen is formed at the regulating station. This pen allows of the despatch, on urgent demand, of a day's supply of livestock for one or two army corps; it has also to consign the cattle required by the men of the Commissariat.

To sum up, the cattle pen of an army corps is renewed either from the livestock of the district, or by means of consignments from a store; the store is replenished, in proportion as the livestock are forwarded to the army, out of the supplies of the reserved area immediately in its neighbourhood; and, when these are exhausted, the supply of the store is assured by consignments from a collecting station. Such is, in outline, the method on which the supply of fresh meat to the army is organized; the store is the essential organization for the purpose, as it is for food supplies of every kind; here the greater part of the bread consumed by the troops is baked, the coffee roasted, rice, cheese and large quantities of vegetables (potatoes, beans, split peas, cabbages) are collected and forwarded, as well as tins of sardines and tunny, sugar, tinned soups, chocolate, tea, coffee tablets, wine and even soap, candles, matches, tobacco and cigarettes.

GREAT BRITAIN AND IRELAND.

BATHURST (CHARLES): LAND SETTLEMENT OF EX-SERVICE MEN. *The Nineteenth Century* No. 465, November, 1915. pp. 1097-1113.

In his article in *The Nineteenth Century* Capt. Bathurst asserts (it cannot be said that he estimates, since he adduces no reason for choosing one figure rather than another) that at least 8 per cent. of the *personnel* of the New Armies, not previously so engaged, will after the war desire rural occupation

as a means of livelihood, and at least 3 per cent. will prefer such occupation at home rather than overseas if facilities are forthcoming immediately upon termination of their war service and if there is a reasonable prospect of commercial success. In other words, there will be, at the end of the war, some 90,000 potential home settlers, some of whom will be partially disabled but quite capable of making a living out of light rural occupations and Capt. Bathurst proposes that these men with their families should be established on small holdings grouped in colonies of convenient size in suitable situations. The area provided for each ex-Service settler would depend necessarily upon the nature of the soil, climate, and produce in view. Fifty separate holdings might form a convenient number to group into a colony and the total area might vary from 1200 to 200 acres.

The success of such a scheme would depend to a large extent upon the ability of the settlers' women folk to be of real assistance in butter-making, poultry-rearing, bee-keeping, fruit-growing and the other lighter agricultural occupations, and for this reason, and further, because male labour will be very scarce throughout the whole of next year, the training of young women in these occupations should be begun at once. County Councils and the Boards of Agriculture and Education should immediately set themselves to the provision of facilities for teaching and training the wives and daughters, sweethearts and sisters of service men.

The next important desideratum is the teaching of co-operative methods and the provision of the necessary machinery for the collective purchase of implements and general farm supplies and the collective sale of produce. In order to take full advantage of co-operative methods, which (in the opinion of the writer) are essential to the success of any small-holdings scheme, suitable large estates, should be purchased as they come into the market and colonies fully equipped *ab initio* established upon them. A start could be made immediately with such of the partially disabled men as are likely to make successful small-holders.

In each colony a central co-operative dairy should be established, and all costly machinery and equipment for occasional use such as a threshing machine, sheep-dipping tank, potato and fruit-tree sprayers, motor-tractor and even heavy horses should be collectively owned and hired out at easy rates to the members. The colony should also own or hire collectively pedigree bulls, stallions, rams and boars. A certain area in each colony should be reserved for use as a demonstration farm and placed under the control of a competent manager. Men who have had no previous training in agriculture could work for a certain time as labourers upon the demonstration farm in order to gain experience.

The chief difficulty would lie in the adequate financing of the scheme. The land required would, it is proposed, be leased from the owners by Government by some local authority such as the County Council or by a Land Settlement Authority appointed *ad hoc*, and sublet to each individual occupier or, preferably to the colony organised as a body corporate under the Industrial and Provident Societies Acts. The colonists might in many cases be able to provide the necessary working capital themselves, and for the remain-

der Government loans might be made available to approved applicants — especially to warrant and non-commissioned officers in the Army and petty officers in the Navy — according to their capacity, education, previous experience and the qualifications of their women folk.

Capt. Bathurst is no believer in small holdings schemes as they have hitherto been carried out in England.

"Considering the magnitude of the machinery set up," he writes, "and the very large public expenditure involved, the artificial creation of statutory small holdings has been a failure, like most land schemes initiated by politicians whose social aspirations are commendable but whose agricultural knowledge and experience are small.

"During the seven completed years since the Small Holdings Act, 1907, came into operation, and with the aid of every species of political and departmental stimulant, the total number of individual applicants provided with holdings by the County Councils was only 18,486 and of these 33 per cent. have already vacated possession of them".

In the face of such a record, however, he is confident that his scheme for ex-Service men could be made successful, principally because, — "By contrast with the would — be small-holder of the past these ex-Service men will be young, keen, teachable, generally business-like, resourceful, courageous, and, knowing the advantages of joint action and comradeship, inclined to co-operation."

SMITH (J. DRUMMOND): THE HOUSING OF THE SCOTTISH FARM SERVANT. *The Economic Journal*, Vol. XXV, September, 1915. pp. 466-474.

In an article which barely fills nine pages of *The Economic Journal* the writer deals with what is really the heart of the farm labour problem in Scotland — the question of housing farm servants, — and the picture which he draws of present day conditions is sufficiently dreary and would, indeed, be depressing were it not for the fact that the reader is shown that here and there in recent years improvements have taken place and there are signs that the movement for reform is growing.

Unmarried farm hands in Scotland either live in a room apart from the farmhouse on what is called the "bothy" system, or eat in the kitchen of the farmhouse and sleep in a room of sorts either in the house itself or, until quite recently, more often over the stable. In the "bothy" a plain table, a few forms and "cooking utensils of a rather meagre description" are provided by the farmer, but the men usually have to do their own cooking. Even if the men are able to cook they have little time either in the morning or at midday to prepare food, and in the evening they are generally too tired to do so. "The most striking thing about the bothy," the writer says, "is its shivering bareness and want of comfort."

Even under the other system, where the men eat in the farm-kitchen, the sleeping rooms are, as a rule, bare, dreary and fireless. These housing

systems are largely responsible for the habits which the younger men acquire. The single men are said to be constantly moving from farm to farm, to be rough in speech and behaviour, to be loose in morals. Certainly the comfortless conditions under which they live make for roughness and laxity.

Conditions for the married farm hand are often equally bad. Cottages are insufficient in number, are almost invariably too small for comfort or even for health, and are often damp and in bad repair. They have seldom any conveniences in the way of wash-houses, cupboards, sculleries or sinks; the water supply is sometimes two or three hundred yards from the house, and is not always above suspicion. The normal type of cottage consists really of only two rooms, a kitchen and a bedroom or (in the vernacular) *a but and a ben*. The kitchen (the *but*) is usually a fair-sized room as it has to hold a bed or beds and serve as the chief living room. The bedroom, or *ben*, is small, and a sort of closet which exists between the two is hardly to be dignified with the name of "room". The accommodation is quite inadequate, the more so as such cottages are occupied by a healthy vigorous race whose families are usually large.

The difficulty in the way of providing better cottages lies in this, that the cottages are tied to the farm and are reckoned as part of the men's wages. They are leased by the farmer with the farm but they are admittedly the last part of the steading to receive attention either from the farmer or from the landlord. The farm servant occupying a tied cottage is in a peculiarly bad position. If he complains he runs the risk of losing not only his job but his home as well. When he bargains with a prospective employer he may hold out for an increase in his money wages, but he must accept whatever kind of cottage exists upon the farm where he finds employment.

The problem of bad housing in Scotland is not of the same difficulty as in England where bad housing is closely connected with low wages. The Scottish farmer has been shrewd enough to see through the fallacy of the cheapness of badly-paid farm labour, but has not yet realised that the house in which a man lives is related to his efficiency as a worker in just the same way as the wages he receives.

The writer of the article admits that many landlords simply cannot afford to erect new cottages, and suggests that in such cases it would be good policy to grant Government loans at a moderate interest, and with proper safeguards, for the purpose of building. The local authority might also, under certain circumstances, itself undertake the erection of cottages. But in the first place the vicious system of the tied cottage should be ended once and for all. With the tied cottage abolished the labourers would probably wish to live together in groups, and this from many points of view would be a distinct advantage, as it would make it possible to provide those conveniences which are so vitally necessary for making the cottage a real home. If grouping took place some reduction of hours would be necessary, but this would be a gain rather than a loss as the hours of farm servants are at present notoriously long. At any rate, in one way or in another, housing conditions must be improved. The prosperity of the labourer is as essential to the true interests of agriculture as the prosperity of the farmer.

TUNIS.

GÉNIAUX (CHARLES): LA TUNISIE PENDANT LA GUERRE (*Tunis during the War*). *Revue de Paris*, October 1st., 1915.

The European war found Tunisian agriculture in the midst of crisis, for the harvest of 1914 was an almost complete failure, and we may say that the work of the Protectorate consisted in preventing a famine among the population. A very recent enquiry undertaken on the spot by Mr. Charles Géniaux, well known for his interesting publications on Tunis, enables us to judge how far the effort of the Government has been successful.

In May, 1914, in order to make up for the failure of the harvest and come to the relief of the farmers, the Protectorate opened a first credit of 2,000,000 frs. for purchase of wheat for needy natives, 100,000 frs. for relief works and works of public utility and 200,000 frs. for loans to colonists. In the beginning of August the Government forbade the export of grain from the Regency and ordered the Director of Agriculture to obtain, if need were, by means of requisition, the food stuffs needed by the population.

A current account of supplies was then started. Purchases of grain for sowing to the value of 3,000,000 frs., corresponding with the net resources of the Mussulman thrift societies, were then made. The 5,000,000 frs. that were first spent seemed insufficient and, in view of the great and pressing need, other purchases were made and entered in the supplies account, from which they will gradually disappear as the credit or debit balance is entered into account of the native thrift societies or in that of the estimates.

Up to the present, according to M. Charles Géniaux, more than 100,000 quintals of barley and 100,000 quintals of maize have been purchased. At the rate of 250 grams per day per person, this will assure 400,000 Tunisians of the means of subsistence. New purchases will be made as soon as necessary, and nearly 7,000,000 frs. will be devoted to the purpose. The grain is distributed by the of Finance Department for the account of the native thrift societies, as loans to be repaid. As the new harvest is good, these loans will be most of them repaid.

On the other hand, eight million francs worth of barley and wheat for sowing have been distributed among the Tunisians recognised as unable to obtain seeds without resorting to the usurers, who ask at least two sacks of wheat for each sack lent, that is 100 %. when they do not ask 250 %. The departure of 32,000 sharpshooters, nearly all farmers, favoured the designs of these speculators. The Finance Department induced the loan and thrift societies, founded in each *caïdat* in 1909, to take action. This was the easier as the excellent harvest of 1911 had permitted of the organization of long term mortgage loans, making it possible for the Tunisians to purchase modern implements and to work their farms.

Loans in money were granted for fifteen years at 8 %, the rate being reduced to 6 % when the holdings were registered. At once sales with right of redemption became rare ; the usurers suffered. A little later, the local credit societies were authorized to form co-operative societies, so as to extend the amount of their business. Village artisans could profit by these provisions, equally with the farmers, and the inhabitants of the Jerid and the Sahel hastened to ask for credit to revive their home weaving industry. Special co-operative societies were formed in regions suited to market gardening, such as Makhtar or suited to the improvement of Barbary sheep, such as Thala. These institutions not only improve the economic condition of the natives but increase the prestige of the Government and promote confidence and solidarity among the natives. The following extract from a letter sent by an important personage of the industrial region of Jerid, to the Director of the Economic Services, affords eloquent testimony of this :

"Thousands of natives of Jelas, Kairwan, the Hammama, the Fsachiches, and Madjeurs (regions that produced no grain in 1914) have come to the Jerid to implore their co-religionists to assist them in selling their dates in advance. The inhabitants of the Jerid had compassion and following the example of the Government, which is multiplying its efforts to relieve the poor, arranged for the sale of the dates on the most favourable terms, to be paid for at the next harvest, June, 1915. They have thus lent on honour to the amount of more than 20,000 sacks of dates. Each of the borrowers returned home, content to have assured his family of the means of subsistence. The inhabitants of the Jerid thus lent about 500,000 francs, when they might have received the greater part of this amount in money, if they had insisted on cash sales. But they were incited to act in this way by the desire to associate themselves in the work of assistance undertaken by the Government."

Let us add that the European war has favoured the local weaving industry in a singular degree. The Finance Department having assured M. Monge, Director of the Native Industrial and Commercial Experimental Laboratory, of the necessary credit, he addressed himself to the War Department, guaranteed regular delivery, the best quality and the saving France would make in applying directly to the producers. The natives obtained the commission. As a result nearly 500,000 frs. has circulated from hand to hand, from the peasant selling his wool and the spinners to the weavers and tailors. The Finance Department, which has assisted in reviving the native industries by extending to commerce and industry the right to borrow from the thrift societies, sanction the formation of co-operative societies with special objects, such as the purchase in France of cotton for weaving or of indigo for dyeing. Besides this, the people of the Jerid obtain wool on conditions which will allow of continuous work during the war and even of fair profits.

The directly agricultural work of the Economic Services is quite as useful. The peasants of Tunis, says M. Charles Géniaux, observe that they only obtain fair crops when abundant rains fall on their fields, not

too well ploughed with their antique implements. Whilst their French and Italian neighbours every year reap a more or less abundant crop, the bedouins hardly obtain one satisfactory harvest in three.

Concerned at so serious a state of things, M. Bériel, Director of the Native Economic Services of the Regency, would like to facilitate for the farmers the purchase of the livestock and implements necessary for working their farms. Co-operative societies already facilitate for the natives the purchase of ploughs and livestock and enable them when necessary to build shelters for their flocks. But the Arabs, delivered from the usurers, are exposed to other dangers. Sometimes they buy improved implements which they cannot use and in the Bejaoua, for example, a few years ago, French ploughs might be seen abandoned in the furrows by the natives who had not draught animals strong enough to enable them to make good use of them and did not know how to keep and repair them. Such failures do more harm than if the attempts had not been made. It would be deplorable if the good intentions of the native should result in his loss. Just because he is making progress he must be advised and instructed at each step.

The war has not interrupted the agricultural work of the native services; quite the contrary. In August, 1914 an agricultural school was opened at Smindja for the sons of Mussulman landowners. A first group of twenty boarders are there receiving practical and theoretical instruction.

Again a larger number of tours have been made in the various agricultural centres. The agricultural officers or agents charged to instruct or enquire into the needs of rural districts arrive on mules, go to the places of public assembly, where, as there are no European chairs, they sit on mats and are soon surrounded by natives. When he has finished his instructive address, the agricultural engineer answers the questions put to him. In turn potatoes, ants, medicine, cattle foods, justice etc. are discussed. As, unfortunately, such meetings cannot be held as often as they should, and in order that the profit from these may not be lost, the Economic Services Department edits a monthly bulletin in the spoken Arabic dialect, that the peasants may understand. In each number the labours of the season are treated as clearly as possible. The farmers receive this periodical gratis and this assures durable relations between them and the Tunis office.

In the future, M. Charles Géniaux tells us, the Economic Services would like to ensure the integrity of small native homesteads, which will be a difficult matter. The Arab has never been able to resist the attraction of a sum of money. He cannot see a "denro" glitter in the hand of a usurer without wanting to take it, offering as security his garden or his fields. The usurer lets years pass without claiming the excessive compound interest agreed to in the contract. Then, after having watched his debtor, he profits by a famine, as in 1914, when wheat and olives fail together, to demand imperiously the amount due. The debtor, who cannot pay, sees his holding sold, or, as happens at Cape Bon, he is left

the tenth or eleventh part of it and obliged to cultivate it while receiving only the tenth or eleventh part of the produce.

A first satisfactory attempt at establishing an undrainable homestead was made at Sidi Buzid. Better still, it is desired to fix the nomads on the land, making them grants of about 18 hectares per family in regions where long ago Roman colonists successfully cultivated olive trees. In this way the immense olive gardens of "Ifrikia" would be reconstituted, and the wandering herdsmen would be civilized. They are now frightfully poor and seldom satisfy their hunger. Gradually the central and southern regions of Tunis, now at best serving for the migration of sheep providing their owners with a precarious livelihood, would recover their ancient fertility.

It must, besides, be recognised that the land systems of Tunis were very little suited to fix the farmers on the land. The Mussulman landowner only rents his land by the year, to the metayer, called *khammès*, that is to say, the *fifth*, because, as remuneration for his work, he has right only to the fifth part of the produce of the land. Under these uncertain conditions in regard to time and wages, the poor farmers cannot improve their methods of farming. They understand that additional effort on their part, which may give increased value to the holding, will be no profit to them, for the landlord can evict them the following year and let a new *khammès* benefit by the improved farm. The Economic Services Department is endeavouring to prolong the lease of state land and trying to obtain from the administration of *Habu* land leases somewhat similar to those in France. On the other hand, there is a way of enabling farmers of moderate wealth in Tunis, to obtain possession of the land: this is sale by "enzel." The purchaser pays the seller or his heirs a fixed rent and becomes proprietor of the holding without paying anything but an annuity. If possession in this way became more frequent, it would have the advantage of increasing the production of the country.

At Gamuda, part of a large state farm has been thus portioned out among natives who before had only a yearly tenancy. The administration has even been careful to defend the purchasers against their own improvidence by clauses making the lots transferred real homesteads and preventing the concessionnaires from being dispossessed by distraint or sale. In the north of the Regency, at Gubellat, it is desired to assign land to the Arabs in the neighbourhood of the colonists, so that they may provide the latter with permanent labourers. The immense domain of Enfida, in a very favourable district, will soon sell land by "enzel."

URUGUAY.

El URUGUAY EN 1915. Boletín n. 3 Oficinas de Exposiciones (*Uruguay in 1915. Bulletin No. 3. Exhibition Office*). Montevideo. Printed by A. Barreiro y Ramos, 1915. 8vo., pp. 238 with photogravures and diagrams. (In Spanish and English).

This is the 3rd. number of the publications of the Exhibition office of the Department of Industry, the object of which is to make the Uruguay better known abroad.

After a short historical notice of the country, the work under consideration gives interesting particulars in regard to its political, administrative, economic, military and judicial organization, as well as in regard to the work of each of the departments of State. However, the chief portion is devoted to an enquiry into the essential sources of the wealth of the country and especially into agriculture and stock-raising.

In regard to stock-raising, the most important of the industries of the country, we reproduce the following statistics. The number of head of cattle, which was in 1860 3,632,203, had increased in 1908, when the last cattle census was held, to 8,192,602. In the same period, the number of sheep had increased from 18,607,717 to 26,286,296. The amount of wool exported had increased from 1,521,659 quintals, valued at 32,371,744 gold pesos, in the five years' period 1884-1888, to 3,156,584 quintals of a value of 101,012,398 gold pesos in the period 1909-1913.

The meat industry has also greatly developed in the country, where there are now 13 *saladeros*, 7 preserved meat factories, and 2 refrigerating establishments. In the period 1908-1912 the exportation of livestock produce from Uruguay was valued at 197,555,653 gold pesos.

Although Uruguay is very fertile and its soil is almost everywhere adapted to various kinds of cultivation, agriculture has not yet made the same progress here as stock-raising. It must be noted that the average grain crop has been small, in certain years; however, according to the publication under notice, this is due to the cultivation being carried on "still in a rudimentary fashion, without good preparation of the soil, or selection of seeds, without manure, irrigation or other improvements of the land, which in certain regions, where they have been introduced have doubled the yield or increased it threefold." The wages of the agricultural labourers are shown in this book to be 15 pesos per month, while board and lodging is also given. The working day is generally eight hours.

The publication in question further furnishes interesting information in regard to the encouragement given by the State to immigration, with the object of colonising the country districts. In fact 282 immigrants entered the country in 1908, 1,355 in 1909, 2,455 in 1910, 2,375 in 1911, 3,305 in 1912, and 5,358 in 1913, settling in almost every part of the Republic.

RUGGERI ALFREDO, gerente responsable.

